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Original Articles.

THE PROBLEMS OF SERUM-THERAPY.

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With the advance of our knowledge of immune serums the evidence becomes more and more convincing that they operate chemically to produce their effects. So long as we conceived that their introduction into an animal was succeeded by a general vital reaction by means of which the cells received some kind of invigoration or rejuvenation, the conditions under which the serums operated were so occult that it seemed impossible to attain positive information about them.

The recognition of the chemical nature of the reaction, and the discovery that the laws governing it are not unlike laws governing other reactions with which we are familiar, together with the discovery that the toxin-antitoxin reaction is but one of a large series of vital reactions, has opened the way to new applications of serums in practice, and has suggested entirely new lines of research.

It will be remembered by those who are familiar with the literature and history of serum therapy that the subject had its origin in studies upon immunity. The only form of immunity that suggested itself to the pioneers in the investigations was immunity to the infectious agents—the bacteria. Pasteur was the originator of artificial immunization, and subsequent workers followed closely in his footsteps. The next advance was the production of immunity to the disease-producing products of the bacteria. This was first achieved by Salmon and Smith, and Behring and Kitasato utilized this principle in their researches.

It occurred to Ehrlich that if the toxalbumins of bacteria would cause immunity and the formation of antitoxins, probably other vegetable toxalbumins would do the same and he proved the truth of his conclusion by his experiments with ricin and abrin. The subject of animal poisons was next attacked by Phisalix and Bertrand, and by Calmette, who found that the venoms of poisonous serpents reacted in the same manner. From this time on the subject of toxicology underwent a new development through a great amount of experimental work done in endeavoring to produce immunity to and develop antitoxins for the different animal and vegetable poisons. Very little success was obtained with mineral poisons, the only one of which a successful report is made being arsenic, which Besredka found capable of generating antiarsenine when properly introduced into the body of rabbits. Having thus worked over the field of poisons very thoroughly, experimenters next turned their attention to other active substances, and Morgenroth discovered that the introduction of rennet into the body of an animal was succeeded by the appearance in the blood of a principle (antirennene) which impeded the action of rennet upon milk. Bordet, and Bordet and Gengou, worked with fibrin ferment, and found that the introduction of fluids rich in this ferment into the body is followed by the occurrence of some substance in the serum by which the coagulation of the blood may be prevented or delayed.

There are thus presented to us a variety of reactive phenomena, more or less closely related to one another in that there occur in response to a similar form of stimulation more or less similar substances.

When we come to study more particularly the nature and conditions of the phenomena, many points of interest at once appear. In rare cases the blood of normal animals manifest a more or less marked degree of the same activity which appears in the blood of animals that have undergone the process of immunization. Why a few animals should present this peculiarity is a problem at the present time unsolved. It may indicate that there are various ways in which the balance of physiological energy can be altered, and that at times other stimuli than artificially introduced toxins, etc., may lead to the generation of serums of phenomenal action. On the other hand, it is, of course, not impossible that the experiment animals have under natural conditions come under influences resembling those to which we subject them experimentally. Thus Cobbett, who has made the most interesting and important observations upon the occasional occurrence of antitoxin in the blood of normal horses, has also observed spontaneous diphtheria in a horse.

Except in these rare cases, however, the appearance of antitoxic, anticoagulant or other phenomenal powers in the blood depends altogether upon the manipulations to which animals have been subjected.

The formation of the bodies takes place through means that are not yet clearly explained, though the "lateral chain" theory of Ehrlich affords a very satisfactory explanation for many of them. This theory prosupposes that the stimulating substances introduced into the experiment animal have the power of combining with certain groups of molecules in the protoplasm of certain cells in the body, for which they have affinity. The combination is succeeded by a regeneration of the lateral chains, which appear in a quantity slightly in excess of that existing before the stimulation of combination occurred. When more of the combining substance is now injected into the animal and the combining lateral chains again

consumed, another still more copious regeneration occurs, and so on until the particular lateral chains are present in great excess, pass out of the cells into the blood where is it known to us as antitoxin.

It will be noted that this is a purely chemical theory which implies throughout that the lateral chains and antitoxin are "combining substances."

It may be well to consider the evidences which exist at present to support this chemical theory.

1. The action of antitoxin upon toxin always takes place in fixed proportions, without relation to the quantity employed. Thus, if a certain quantity of antitoxin protects an animal against a certainly fatal dose of any toxin, it is always true that within a small percentage of error, ten times the antitoxin will protect against ten fatal doses, and one hundred times against one hundred fatal doses. So positive is this law of multiples, and so accurate is the result of its continued application, that Ehrlich has made it the basis of his method of testing the value of antitoxins, which are estimated against one hundred fatal doses of toxin.

2. The separation of toxin and antitoxin when once mixed under proper conditions is probably impossible. There are different opinions about this, as Roux made what he supposed to be neutral mixtures of toxin and antitoxin, which produced no symptoms when introduced into certain animals, but which caused local symptoms and even death when introduced into other species of animals. This, he believed, showed that the toxin was not combined with the antitoxin, as it was able to produce death. Cobbett, however, points out that in such a neutral mixture there is always considerable free or unneutralized toxin—less than one fatal dose for that animal for which the mixture is neutral—which may be sufficient to cause the death of a more susceptible animal. At Roux's suggestion Calmette endeavored to separate venom from antivenene with which it had been mixed by the use of a degree of heat which coagulated and precipitated the serum, but did not injure the venom. He found that neutral mixtures when heated became poisonous again. Martin and Cherry, however, showed that Calmette might have had different results if he had permitted the venom and antivenene to remain in contact for a short time at a temperature of 35 C. This allowance for time and temperature was shown to be necessary by Ehrlich, who found that the action of antiricin upon ricin was accelerated by warmth and retarded by cold, and that time was essential to its occurrence. Martin and Cherry found that if the neutral mixtures of venom and antivenene were permitted to stand for a half-hour at 35 C., then heated, the mixture did not again become poisonous.

Filtration has also been employed for the purpose of proving the chemical nature of the reaction. Martin and Cherry found that solutions of venom passed through a porcelain filter coated with gelatin, but that the antivenene, having molecules of larger size, did not pass through. If no chemical action between toxin and antitoxin took place, then when a neutral mixture was filtered, the filtrate should be poisonous. This they found to be untrue. The filtrate from neutral mixtures was harmless. Cobbett repeated these experiments with venom and antivenene, and also with diphtheria toxin and antitoxin, and found the filtrates harmless.

3. The occurrence of the reaction *in vitro* is one of the best proofs that it does not occur through some indirect action of the body cells. It is true that no visible reaction takes place between diphtheria toxin and its antitoxin, between tetanus toxin and its antitoxin, or between venom and antivenene as ordinarily mixed, but there are reactions that take place in the test-tube under the very eyes of the experimenter that are of the greatest interest and importance.

It has been shown by Kossel that the serum of poisonous eels (many eels have blood poisonous to small mammals) has the property of dissolving the coloring matter out of the red blood corpuscles of rabbits and guinea-pigs. When defibrinated blood of one of these animals is diluted with physiological salt solution and placed in a test-tube, the addition of a certain quantity of eel's serum causes the corpuscles to dissolve. The addition of the serum of an animal immunized to the poisonous action of eel's blood, when added to the blood and eel's serum mixture, entirely inhibits the laking power of the eel's serum, and does so in definite proportions.

Ehrlich found that ricin, when added to defibrinated blood, caused agglutination of the corpuscles which rushed together in clumps, but that the addition of a proper proportion of antiricin entirely inhibited its action in this respect. The reaction he found to be inhibited by cold and accelerated by heat, and to require a certain length of time for its occurrence.

Morgenroth found that the blood of an animal that had received frequent injections of a solution of rennet entirely inhibited the action of rennet upon milk. Carefully estimating the quantity of rennet, the temperature and the time necessary for the occurrence of milk coagulation, he found that the addition of a definite quantity of the antivenene was invariable in its inhibiting influence. Normal serum exerted no influence upon the coagulating power of rennet.

Madsen has given most interesting demonstrations of the effect of the hemolytic principle of tetanus toxin, and the control of its effects upon the blood corpuscles by immune serum. When defibrinated blood is isotonically diluted with saline solution and placed in a test-tube, the addition of the tetano-lysin is followed by the solution of its pigment. This solvent action is entirely inhibited by the immune serum, though normal serums are powerless to prevent it.

Bordet, and Bordet and Gengou, have succeeded in the production of a body antagonistic to the coagulation of the blood, by the injection of animals with fluids rich in fibrin ferment. They found that a given proportion of this serum would check the coagulation of rabbit's blood to which it was added, and that definite quantities of it were antagonistic to definite quantities of added fibrin ferment.

A most valuable contribution has come from the pen of Ehrlich and Morgenroth, who investigated the solution of blood corpuscles by hemolytic serums. They found that the laking of the blood is by no means a simple matter, but one in which numerous factors are involved.

The chief important factor is what they describe as the *immune body*, and it is through the activity of this that the corpsucles are dissolved. The immune body is however, only able to operate in the presence of another body which is complementary to it, and is called the *addiment*. It is very interesting to note that it makes considerable difference in what order the factors involved in the reaction are brought together, not all combinations of the three essentials—corpuscles, immune body and addiment—being followed by laking.

Mark Richardson, in a paper read before the American Association of Pathologists and Bacteriologists, in Boston, in 1901, has shown how truly this principle applies

in certain diseases for the treatment of which immune serums have thus far been found inadequate. It is well known that highly immune typhoid serums not infrequently cause solution of the specific bacilli. It is, however, an almost universal experience that the injection of such highly immune serums into patients suffering with typhoid fever is not followed by any appreciable amelioration of the symptoms. One would imagine that solution of the bacteria must necessarily follow, but the difficulty seems to be that it is not the immune body, in which the serum is rich, but the complementary body that is needed. This might be supplied with ease, could we find out just what serum best furnishes it, yet its addition might not be followed by the expected result, for the reason that the order of combination is so essential. Thus, Richardson found that the injection of normal serum containing the complementary body did not improve typhoid fever, because the immune body having been preformed in the body, interfered with the necessary primary action of the complementary body upon the bacteria.

Experimenting with bacteria in the hanging drop, he found that if it was true that a mixture of typhoid culture, normal serum and typhoid immune serum produced hemolysis, it was almost certainly not true that typhoid bacilli, immune serum and normal serum would do so, the difference being solely in the order in which the combination took place.

Wassermann also demonstrated the accuracy of Ehrlich's view by his experiments with typhoid infection, and concludes that two separate substances are concerned, one of which kills the bacteria, the other serving to fix its combination with them. To the bactericidal substance he applies the name "end body," that which fixes the combination the "intermediate body." Experimentally he found that normal beef serum was best adapted to the supply of "end body," so that when he inoculated guinea-pigs with three loopfuls of typhoid culture, and after 30 minutes gave them a hypodermic injection of 0.5 c.c. of typhoid immune serum and 4 c.c. of fresh normal beef serum, they recovered, while the control animals which received normal serum, or immune serum alone, all died in 24 hours.

The number of cases reported by men of trained observation, in which the injection of normal serums has been followed by improvement in various diseased conditions, can be in part explained upon the assumption that it supplied to the blood some *intermediate* or *complementary* substance, essential to the proper performance of physiological function, but which is temporarily deficient.

How widespread and important these immune and intermediate bodies may be in our processes it is impossible to say, but the recent observations of Metchnikoff indicate that they have very wide spheres of usefulness.

Metchnikoff found that the introduction of any kind of cellular tissue into the body increases the ability of the blood to act destructively upon that kind of tissue. Thus, if blood of one animal is injected into another, its serum becomes hemolytically active. If comminuted epithelium is introduced, the serum becomes epitheliolytic in its tendencies, etc.

Here we find an entirely new reaction, with an entirely new sphere of usefulness. Unfortunately, it is still too new to predict what may be the value, if any, of this phenomenon in practice. The possibility of thus attacking cancer at once appeals to us. How desirable it would be to produce a serum whose activity would be to inhibit the growth of epithelium and hasten the destruction of epithelial cells!

However, the lesson that is to be learned from the achievements thus far consummated is that the action of immune serums is far from simple, depends upon many factors with which we are just beginning to become acquainted, and that the failure of our efforts in many directions in the past may simply be referable to our ignorance of how to use materials at hand.

THE PREVENTION OF PELVIC DISEASE DURING AND AFTER LABOR.*

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The prevention of pelvic disease during and after labor consists in the avoidance of infection and traumatism. Infection is frequently the almost necessary result of traumatism, but traumatism without regard to infection is frequently followed by more or less serious pelvic disturbances.

CLEANLINESS NECESSARY.

During the course of an otherwise normal delivery, the great danger to the mother is from infection carried in from without. No modern physician, I take it, believes in auto-infection, that is, in any infection arising from within the pelvis. A chronic disease of the appendix, or of the appendages, may be lighted up by the process of delivery, but no pelvic disease will be initiated except by infection from without. This infection may be introduced in a variety of ways. The very latest bacteriological investigations have shown conclusively that the secretions of the upper part of the vagina are entirely sterile. It is not until they reach the introitus that they show evidences of contamination. The introduction of the examining finger inevitably carries some of this infection from the vulva into the vagina and up to the cervix. Copulation has the same effect. Many women practice self-examination, and this doubtless accounts for certain otherwise obscure cases of puerperal infection in which the attending physician after his arrival has exercised all due precautions.

Before the introduction into obstetrical work of antisepsis, and later of asepsis, the mortality in lying-in hospitals, where infection was carried from patient to patient, was simply frightful; but with the recognition in these institutions of the sources of danger and the means for their avoidance, the mortality has decreased until now a properly managed hospital is the safest possible place for a woman to be confined, not only as regards mortality, but morbidity. The same is not true, however, in private practice. The investigations of Bacon of Chicago, and of Boxall in England, show conclusively that in general practice, and especially in rural districts, puerperal mortality and morbidity are practically no less than before the days of Lister. It is the general practitioner, therefore, who must improve his methods.

The use of antepartum douches, as recommended some years ago when the vaginal secretions were regarded as infected throughout, is to be unequivocally condemned. These secretions are nature's lubricant and should not be unnecessarily interfered with. If, however, from his knowledge of the case, the physician suspects a gonorrheal infection to be present, then not only should

* Read in a Symposium on the Prevention of Pelvic Disease, before the Ohio State Medical Society, at Cincinnati, May 9, 1901.

the douches be used, but the vagina should be scrubbed out as thoroughly as before a surgical operation. This cleansing is done not only in the interests of the mother, but in the interests of the child, for the prevention of gonorrheal ophthalmia. In the absence, however, of such known or suspected infection, the special cleansing processes should be limited to the vulva and the region about. If this is done, and the practitioner uses the ordinary precautions as to the cleansing of the hands and instruments, puerperal infection will not take place.

In giving directions as to the cleansing of the hands of the attending physician it is entirely useless to advise any such extremes of asepsis as will not be carried out. These precautions must be limited to such as are feasible and sensible. I have seen explicit directions given requiring at least ten minutes for the scrubbing of the hands with soap and hot water, and then three minutes' continuous soaking in a 1 to 1000 bichlorid solution; or a similar scrubbing of the hands with subsequent treatment with permanganate of potash and oxalic acid. Such precautions are not feasible in general practice and will not be carried out. If the attending physician scrubs his hands thoroughly with hot water and soap, and if his nails are trimmed short and kept clean, he has done all that can reasonably be expected of him. If, however, he has reason to believe that his hands have been infected by contact with other cases, then the more thorough sterilization previously indicated would be required. If, moreover, an obstetrical operation is needed, involving the introduction of the hand into the uterus, as for turning or the removal of secundines, then the most thorough sterilization of the hand and arm is essential, or, better still, the use of the rubber glove and armlet. For the application of forceps the instrument itself should be sterilized by boiling. This, with the thorough washing of the hands, as above indicated, and the cleansing of the vulva will suffice. The finger-nails of the physician are the main source of danger. Many physicians, especially in country practice, are obliged, to a considerable extent at least, to care for their own horses and to do more or less work about the garden. Such men are very apt to have horny hands which in bad weather are quite liable to become more or less chapped and fissured. It is quite impossible to render such hands absolutely sterile. In such cases rubber gloves can not be too highly recommended.

While the presentation and position of the child can be determined under ordinary circumstances and without any special difficulty by external palpation, this procedure conveys no information as to the condition of the cervix or the progress of labor. This latter knowledge may be unimportant in a lying-in hospital, where nurses and internes are always within reach, but it is of prime importance to the general practitioner, whose duties require him to look after other cases than the patient in labor. He makes a vaginal examination and decides whether he must remain or whether he can be at liberty to make other calls for an hour or more. At the end of the period which he had allowed himself, he returns and another examination enables him to determine for the second time whether he can be spared. These examinations are essential and to forbid them is simply visionary. For these cases, rubber gloves, which can be left in an antiseptic solution during the physician's absence, are a very great convenience and of great value, though not absolutely essential.

Postpartum douches, like the antepartum, should not be used in normal cases. The natural downward flow of the lochial discharge prevents infection from reaching the uterus, while the use of the syringe nozzle, even if just sterilized, may carry infection from the vulva to the cervix, and even within it. In case, however, infection takes place and the lochia becomes offensive, then the use of the vaginal douches carefully administered by a skilful nurse is to be commended.

REMOVAL OF MEMBRANES.

In case a portion of retained membrane or placenta becomes infected, or causes hemorrhage, it should be at once removed. Here, however, the use of the curette has resulted in great harm. A blind curetting of the endometrium under these circumstances will open up a thousand channels for fresh infection while removing the offending body, although it not infrequently happens that the offending bit of tissue itself may in whole or in part be missed by the curette. Under such circumstances the misdirected instrumentation will be followed by a fresh invasion of sepsis, with perhaps promptly fatal results. For the removal of such retained tissue no instrument is as sure and safe as the sterilized finger of the intelligent physician. Give the patient chloroform, sterilize the vagina by thorough scrubbing, sterilize the hands, and then steadying the uterus from above with one hand, introduce the finger and explore the interior. The finger will find the offending tissue and will almost invariably remove it with ease. In case it is too adherent the curette may then be used directly to the spot and without injury to the rest of the endometrium. Such removal should then be followed by a hot intra-uterine douche, so as to thoroughly wash out debris. This douching should be done by the physician himself, and once is sufficient if the preceding removal has been thorough.

TRAUMATISMS.

An overlooked laceration of the perineum, even if the laceration be very slight, furnishes a point for puerperal infection. A lacerated cervix rests in the sterile region of the vagina, but a lacerated perineum is in the region constantly exposed to infection. This exposed surface is promptly removed by an immediate operation. There is no excuse for a failure to detect this injury, since an examination under the eye should be made in every case, nor is there any excuse for failure to close the laceration immediately, since the materials for so doing are in every house. It may be more convenient and look a little more professional for a practitioner to have with him silkworm gut, special needles and needle forceps, but these are entirely inessential. A small darning needle, or a heavy sewing needle, with its temper removed through the center by heating so that it can be somewhat bent; silk, which can be found in nearly every house, or even cotton or linen, hair from the horse's tail, or even a cow's tail for that matter, all these are everywhere available, can be promptly sterilized by boiling and will answer just as good a practical purpose as anything that can be found.

Lack of assistants and of suitable light and instruments render it undesirable to attempt an immediate operation on a lacerated cervix; while the fact that this cervix is in the sterile zone and will very likely heal satisfactorily without further attention, renders its closure of little importance. A laceration, however, involving the vagina and perineum belongs to an entirely different category, for reasons which I have stated, and these lacerations therefore should be repaired either at once or within twenty-four hours.

It will, of course, be useless to cleanse the vulva preceding examinations if the sheets and dressings which

are to come in contact with the cleansed surfaces are dirty. In most houses when labor begins the resources of the ragbag are drawn upon for the construction of an absorbent pad to be placed under the hips of the parturient. If the rags from these sources are clean nothing more can be asked for, but ordinarily their condition is the reverse; hence the attendant should insist upon a sufficient supply of clean sheets, towels, pillow slips, or something of the sort, to secure the necessary protection of the field of delivery both during labor itself and during convalescence.

Rupture of the uterus occurs much less frequently now than it did a generation or two ago, when physicians showed an almost inexplicable disinclination to assist nature by instrumental intervention. The dangers incident to a prolonged second stage are now quite thoroughly recognized and it is seldom that a normal uterus ruptures simply as a result of thinning of its walls from too long continued expulsive efforts or from pressure necrosis. Most frequently rupture occurs either from the presence of a fibroid which has produced pathological thinning, or from efforts at turning made with too great vigor or too long after the rupture of the membranes. The prudent obstetrician recognizes the fact that in certain conditions of the uterus, when the contractions are unusually violent or persistent, the introduction of the hand and the manipulations necessary to turning are fraught with the utmost danger, and the dangers under such circumstances may be much greater even than those of a Cesarean section.

Lacerations of the cervix, vagina and perineum may be considered together, and here I think the present generation is guilty of sins of commission vastly more than our predecessors were guilty of sins of omission. It is confessedly impossible in all cases to prevent these lacerations, but in a large proportion of cases, altogether too large a proportion, these lacerations are the direct result of the too hasty or injudicious use of the forceps. I say this advisedly and as a result of several years of careful investigation of hundreds of cases that have come to me for treatment for conditions the direct result of these injuries.

A normal labor may be defined as one that terminates within twenty-four hours from its beginning, and without injury to mother or child. Of this twenty-four hours all but one or two hours will be taken up with the first stage. Much more than this time may be consumed in the first stage without harm to either mother or child. If the first pains are not too frequent or too severe, a first stage may, without being pathological, last for even two or three days with no effect whatever upon the child, and with no ill-effect upon the mother. An ordinary second stage, however, will not exceed two or three hours, although many times even a longer second stage, if the pains are not particularly frequent or strong, is perfectly normal.

A normal labor should not be interfered with, and any interference, manual or instrumental, is fraught with more or less danger to mother or child, or both. I make this statement deliberately and advisedly. Our predecessors were too timid, and as a result of this timidity, to use no harsher term, many lives were sacrificed, great and unnecessary suffering was endured, and infinite morbidity ensued. But too many physicians of the present day have gone to the opposite extreme, so that their sins are those of commission. The too early and too frequent resort to instrumental delivery is responsible for many serious results. A dead baby with a crushed or disfigured head; a ruptured cervix, vagina and perineum; a collapsed and moribund mother, with a history of forceps delivery undertaken 12, 10, or perhaps only 6 hours from the onset of a first labor, is a picture which is to be seen too often in the experience of a consulting surgeon. The scene does not always close with the lethal exit of the mother, or even of the child, but there follows a tedious convalescence after an immediate operation on the lacerated perineum, with a later operation for the repair of the torn cervix. That is all, provided the patient escape the removal of appendages, made necessary by resulting infection.

A year ago an enthusiastic young gentleman presented to this Society a paper pleading for the earlier use of the obstetric forceps. It is most significant, not to say amusing, that this year the same gentleman is announced for a paper on "The Repair of the Perineum."

It should be impressed most vigorously and pertinaceously that labor is a physiological process and that under all ordinary circumstances delivery will be naturally and safely accomplished. If a physician has not time to do obstetrical work he may refuse engagements or decline the call when it comes, but if he has once accepted the case he is bound professionally, morally and legally to give to the woman and her unborn child all the time that may be necessary for her safe delivery, and no honorable and conscientious physician will do otherwise.

OBSTETRIC FEES TOO SMALL.

I know that in many parts of the country, indeed in most, the fees which physicians receive for obstetric work are ridiculously inadequate. There is no comparison between these fees and the fees received for the ordinary routine work of the profession, and yet the lives and well-being of two individuals, and the happiness of many others, are at stake in every labor, and the responsibility of the physician is correspondingly great. I doubt, however, if the ordinary physician in the state of Ohio receives on an average $10 per case for his obstetric work, this fee including not only his attention during the progress of the case itself, but by custom one to three subsequent visits. I know of nothing in our profession in which reform is more needed than in this particular. An obstetric engagement, carrying with it the responsibility which it does, should certainly furnish as much compensation as a mere broken leg. It is true, perhaps, that among the poorer classes no larger fee can be paid, but the principle should be so far established and the fee-bill so changed that, as in other surgical work, the fees of the rich should make up for the lack among the poor, while for the poorest classes in general clean, skilled midwives could advantageously take the place of physicians for ordinary attendance, the physician being sent for merely in cases requiring intervention or the repair of lacerations.

MISUSE OF INSTRUMENTS.

Instruments should be used only in the interests of the mother or the child, and never simply to save time or suit the convenience of the physician. Convulsions, threatening the life of the mother, or labor so prolonged as to threaten the integrity of the uterus, exhaust the mother or destroy the child, undoubtedly demand instrumental intervention even at the risk of laceration of cervix and perineum. These can be repaired, but the life of the child or the mother can not be restored. With the soft parts dilated or dilatable, but with such a disproportion between the passage and the passenger as will result merely in a long and exhausting, even if not dan-

gerous, second stage, the forceps should be used; but the attendant should be fully satisfied that the soft parts are in suitable condition, since otherwise even if the superficial parts remain intact the underlying fascia may be lacerated with resulting loss of support to the pelvic organs.

But this has not been the teaching, I am afraid, of modern obstetricians, at least if the teaching can be determined by the practice of those who have been taught. I think it is the experience of every man having a large consultation obstetric practice, to be called repeatedly to cases by the physician, who expects him to at once deliver with forceps, and to find the patient in good condition, the membranes unruptured, the cervix half or two-thirds dilated, the vagina only partially relaxed, the perineum not yet reached by the descending head and its tissue far from ready for delivery; the patient a primipara in whom labor had commenced six to twelve hours before. Were convulsions present he would unquestionably apply the forceps and deliver with perhaps a saving of the child and rupture of cervix and perineum. He knows that the woman will deliver herself, if given a reasonable length of time, safely, satisfactorily and without intervention. He explains the matter to the attending physician and sees the case with him three or four hours later. Finds labor progressing and again postpones intervention until finally the patient delivers herself. The attending physician, if wise, has probably been taught his most valuable lesson in obstetrics, the lesson of judicious waiting.

But this is evidently not the teaching which too many young men receive before their graduation, or perhaps after it. In the *Philadelphia Medical Journal*, of April 13, page 706, in this, the first year of the twentieth century, is an article by a well-known teacher of obstetrics in a New York post-graduate school, in the course of which the writer, in alluding to a series of his cases, states that these cases were nearly all of them "operative ones or were made so because of the presence of an ever-inquiring audience. All my cases were delivered before an audience of physicians who . . . were unwilling to camp over night in a pauper hospital to watch a tedious labor case. . . . Most of the cases would have delivered themselves normally."

Here now is a teacher who reports his work without apparently a suspicion of impropriety. He has performed these operations before a class of physicians who, impressed with the utter indifference with which he interferes with what he confesses is normal labor simply to demonstrate to them methods of procedure, will return to their own homes prepared to carry out in their private practice that which they have thus seen demonstrated in a public clinic. Such practice and such teaching are wholly bad and utterly indefensible. If the antivivisectionists should get hold of that teacher and his work I think before they got through with him he would have learned that there is a God in Israel.

Meddlesome midwifery is bad. This is a statement as old as intelligent obstetrics, but the misuse of this aphorism has done much mischief, since timidity born of ignorance does not properly weigh the meaning of the word meddlesome. Meddlesome midwifery is not that which intervenes in abnormal or pathological conditions, but it is that which interferes officiously with normal processes. In conclusion, then, the prevention of pelvic diseases during and after labor consists, in a word, in cleanliness, patience and intelligent intervention.

PREVENTION OF PELVIC INFLAMMATORY DISEASES AFTER MARRIAGE.*

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Our present knowledge does not extend far enough to enable us to have any influence in preventing benign and malignant growths of the female pelvic organs. For this reason they will be wholly disregarded in this discussion. I have, therefore, somewhat modified the title of my paper as published in the program and will limit my remarks to the prevention of inflammatory pelvic diseases after marriage, as they are preventable in a large majority of instances.

It has been said that statistics are worthless, but I am convinced that carefully tabulated records of cases coming under the observation of physicians are very valuable, especially when honestly used in a discussion like this one. The following statistics have been taken from my private office records, where every case that enters my consultation-room is carefully recorded. These results may be of interest and value to us in this discussion. The records show that in 498 cases of inflammatory disease of the uterine appendages, or of infl mmation in the pelvis, or both, including those having one or many attacks, the infection was due to the following causes: Gonorrheal infection that could be distinctly traced, 247 cases. Of this number 101 required an abdominal section for relief, and of this number a large majority were pus cases. The remaining gonorrheal cases, 146, were not advised to have a section made. Their disease was not serious enough when I saw them to justify a section for the removal of the appendages, and other means were instituted for the relief of their symptoms. How many of this number subsequently came to the operating table the writer is unable to say, but he is reasonably certain that a number of them would eventually be compelled to have a section made for relief. In 143 cases the cause of the inflammation was either an abortion that was unavoidable or induced. A very large percentage of the cases were induced abortion, usually done by the patient herself. Of this number 29 had to be subjected to a section for relief and 114 were otherwise treated, most of them making symptomatic recoveries. I wish it distinctly understood, in passing, that these cases, both gonorrheal and septic, were almost all of them of long standing, from a few months to a number of years, before consulting the writer. Especially is this true in reference to the cases which were subjected to an abdominal section where the cause of the disease was an abortion. In 52 cases the cause of the inflammation was due to the laceration of the cervix and perineum, with malposition of the uterus. Of this number 18 cases were subjected to a section. The remaining number were otherwise treated. Exposure during the menstrual period, or "taking cold" at that time, was recorded as the cause in 29 cases. In the majority of these cases the patients were unmarried, and there is reason to believe that some other cause might be assigned. In 9 of these cases it was necessary to make a section for their relief and 20 did not require a section. Tubercular peritonitis was the cause in 27 cases. Of this number 20 cases were subjected to an abdominal section and 7 were not so advised, because the latter number had no accumulation of fluid or pus that could be diagnosticated.

* Read in a Symposium on the Prevention of Pelvic Disease, before the Ohio State Medical Society, at Cincinnati, May 9, 1901.

Thus it is seen that the two chief causes of pelvic inflammatory diseases are gonorrhea and septic infection following abortion. The prevention of the former has been discussed by the writer on previous occasions, and for this reason will not be considered in all of its phases at this time more than to remind you of the duty you owe to the laity of imparting knowledge upon every possible occasion upon the subject of gonorrheal infection. The physician should instruct young men of the danger to the health of their future wives should they contract gonorrhea. In treating the disease in the male the physician should be certain that the patient has remained well for a period of many months before permitting him to marry. It is a lamentable fact that a very large percentage of the cases referred to in this paper were the wives of men who had the disease before marriage and believed themselves cured; but they infected their wives, in not a few instances, many months after marriage. The writer is still of the opinion expressed in his paper previously published[1] that we must look to the education of the laity for the prevention of gonorrheal infection. Further experience has only emphasized the lesson there taught: "I would advise that during the last year in high school, in every school in this land, a text-book be employed embracing embryology, hygiene, anatomy, and physiology including sexual physiology, and that these subjects be taught to every student, both male and female. This could be accomplished without shocking the morals of the most susceptible or fastidious individual by dividing the classes so as to separate the sexes. A female teacher should teach the girls, and a male teacher the boys."

I can not dismiss the subject without reminding you of the fact that gonorrhea, unrecognized as such, is the direct cause of a long list of what might be termed minor ailments of the female, viz., subacute and chronic inflammatory diseases of Skene's glands and of the glands of Bartholini, which not infrequently result in abscesses. Another complication is inflammation of the urethra, often extending into the bladder and causing cystitis, which is most difficult to cure and in not a few instances remains uncured. The glands of the mucosa also become involved, resulting in cervical and corporal endometritis, with a discharge of the most persistent character. This condition frequently causes sterility or produces a congested condition of the uterus, with dragging sensation in the abdomen, with neuralgia and most serious reflex nervous disturbances. In addition to the above-named ailments we often see the infection extend from the uterus into the tubes, producing salpingitis, ovaritis and attacks of pelvic peritonitis, leading to graver forms of pelvic disease. If we could eliminate gonorrheal infection the gynecologist would lose no small percentage of the patients who come to his consultation-room. The number of operative cases for the removal of pus would be greatly lessened, and we would prevent much of the suffering of womankind.

Septic infection following abortion from retained membranes is of frequent occurrence, and in those cases where the patient makes a primary recovery, as they usually do, there is left an endometritis which is difficult to cure and often leads to salpingitis. The subject of induced abortion is one that is constantly brought before the physician in some of its phases. Seldom a month goes by that some married woman does not come to her physician and state that she is pregnant and wishes to know what she can do to interrupt it. She will frequently tell you that she has taken medicines of various kinds to bring on her menses, but they failed to do it. When we look over our records we find a large number of women suffering from uterine disease which was caused by an induced abortion, and many of the most serious cases calling for the gravest surgical operations belong to this class. Too much stress can not be laid on the gravity of the procedure, and furthermore, it must always be borne in mind that death may be the immediate result of an abortion. Especially is this so where women try to produce abortion upon themselves. About a year ago I saw three cases within three weeks in consultation with other physicians in this city where the women had either produced or attempted to produce abortions upon themselves. In each instance the patient was a married woman, mother of one or more children, and the only reason she had for producing an abortion was the desire not to raise another baby. In each instance the patient was suffering from septic infection. There was a large accumulation of pus in the pelvis, in two of the cases, with profound sepsis. These patients were subjected to vaginal section with the removal of a large quantity of foul-smelling pus. One patient died within a day or two after the pus was evacuated, from her pre-existing sepsis, which had existed for seven or eight weeks. The other patient had a long, tedious convalescence, is a semi-invalid now with adherent tubes and ovaries, and with no immediate prospect of recovery. The third patient referred to had profound sepsis with no accumulation of pus that could be determined. She died within a few hours of my first visit, without any operative interference. These are only a few cases that could be narrated of a long list that every physician is too familiar with. If the patient does not die immediately following the abortion, as stated before, it may be followed by such a serious pathological lesion in the pelvis as to call for the most heroic surgery. They realize their mistake when it is too late to be of service to them and would change it all if they could.

These cases are a fair illustration of what operators see from this cause very frequently. I am inclined to believe that many women are ignorant of the dangers they incur from an induced abortion until it is too late. I make a plea for the more extensive dissemination of knowledge by the family physician to his patrons upon this important subject. Few women would produce an abortion upon themselves or consent to have it done, unless they had a crime to conceal, if they knew of the dangers attending it as the physicians know them. It is in these cases that it is the physician's duty to impart the knowledge. He should explain to her the danger of retained membranes during the early months of gestation and the great danger of septic infection on account of the retained membranes. He should tell her that if she has sepsis afterwards and recovers from it she is left with a septic endometritis which may lead to a salpingitis with suppuration in one or both tubes, necessitating a section for their removal before she is relieved of her pain. It is in this class of cases that an ounce of prevention is worth a pound of cure. They are all preventable; indeed, their occurrence ought to be comparatively rare. It is for this reason that the profession should be united in the effort for the prevention of these diseases.

It is evident that if we are to prevent pelvic inflammation following abortion it is necessary to prevent septic endometritis. This could be done in all instances if the physician could see the patient early enough to thoroughly empty the uterus before decomposition of

1. American Journal of Obstetrics, 1890.

the membranes takes place, but unfortunately, he sees these cases only after this has been in existence for many days, and often he sees them for the first time when they are thoroughly septic from this cause.

By referring to the statistics it will be observed that laceration of the cervix and perineum play no insignificant rôle in the cause of pelvic inflammation. In laceration of the cervix, with the usual laceration of the perineum and the retroversion that so often accompanies these injuries, with the endometritis following it if the injuries are not repaired, we have a condition present which may lead to pelvic disease in a large percentage of these cases. These patients all have subinvolution following their delivery and many of them drift along until the endometritis becomes chronic or even a salpingitis is established. It is the physician's duty to repair the cervix and perineum within a few months after injury, before there is a chronic endometritis and salpingitis established and before the uterus has been in the malposition long enough to cause extensive disease of the ovaries from pressure, to which the ovaries are always subjected after they are dragged down with the uterus in its abnormal position. If the cervix and perineum are repaired within a few months after delivery in all cases where the uterus is retroverted, and that organ temporarily supported by a properly fitting pessary, the physician would save his patient great suffering and prolonged invalidism. It is the physician's duty, where he has waited on a woman in confinement, to examine her carefully within four months after her delivery and make careful notes as to the injuries and the position of the uterus and ovaries at that time; and where the cervix is injured, even if it be slight, and there remains subinvolution, he should curette the uterus and repair the cervix as a means of prophylaxis.

Many of these patients do not complain even where there are extensive tears of the cervix and perineum until several months after delivery, when endometritis is well marked and unmistakable signs of salpingitis are present. The extension of inflammation through the tubes in long standing endometritis following injury of the cervix is a condition not infrequently met with. It is a well-known fact that subinvolution of the uterus, which may continue for many months, is the rule after extensive laceration of the cervix. It is in this class of cases that we occasionally see a chronic catarrhal condition continue for an indefinite period, with depreciated general health of the patient and changed type of menstruation, the patient complaining of pain in the back and abdomen. These symptoms extend over a period of many months until finally the patient goes to bed with a sharp attack of pelvic inflammation. Upon thorough physical examination the physician finds that salpingitis already exists. It may be too late now to cure this patient and prevent recurrent attacks of pelvic inflammation, but I have every reason to believe that if the injury to the uterus had been repaired and the retroversion corrected within a few months after her delivery she would have been perfectly and permanently cured and thus prevented a life of invalidism. Just as long as women bear children just that long will these injuries to the cervix and perineum be recorded against the obstetrician. That should be no cause for chagrin on his part, but neglect to repair them and prevent preventable diseases should be an opprobrium to the medical profession.

The greater frequency of peritoneal tuberculosis in the female as compared with the same disease in the male is a well-recognized fact, and it is fair to presume that the bacillus enters the peritoneal cavity through the uterus and tubes. This theory is sustained by the clinical facts gained in the operating-room in dealing with this disease. If in the future it is definitely settled that the route of infection is through the vagina the question of prevention will be an interesting problem. The fact that the disease occurs in the virgin as well as the woman who has borne children only emphasizes the necessity for careful investigation to settle definitely the mode of infection in this dread disease.

Guarding against the above-named sources of infection is not the only branch of prophylaxis that the intelligent physician is called upon to consider. It is not at all uncommon for the physician to be consulted by one who has recently married in regard to the "best method of preventing conception." The statement is made in almost every instance that they do not wish to have children for a few years, but would not object to one or two after a while. They do not realize the danger that the wife incurs of laying the foundation for a chronic disease which may leave her forever sterile and possibly an invalid as well. The various methods and practices used to prevent conception have a distinct bearing in establishing certain pathologic pelvic conditions in not a few women, especially the practice of using cold water as a vaginal douche. This practice not infrequently causes endometritis which goes on to salpingitis regardless of the best directed treatment for relief, until finally the patient is a subject of pelvic inflammation, with possibly suppuration of the tube, which necessitates a section and removal of the diseased organs for relief.

In closing my remarks I wish once more to emphasize the statement that prevention of pelvic inflammation in women must come largely through the enlightenment of the laity by the medical profession. This can be done only through the profession, and I am convinced that in time it will be done and these preventable diseases will be greatly lessened.

THE PREVENTION OF PELVIC DISEASE BEFORE AND DURING PUBERTY.*

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So intimate is the association between the normal functional life and soundness of mind and body in the young woman, that my part of this discussion resolves itself largely into the subject of general hygiene. However interesting the résumé of authorities upon proper diet, dress, posture and exercise (both mental and physical) might prove, yet I shall consider but a few points of more specific character.

The first question which one naturally asks is: "What are the pathologic conditions of the uterus and its adnexa whose causative factors may be traced to the period leading up to and beyond puberty?" 1, retroversions and retroflexions of the uterus; 2, endometritis; 3, metritis; 4, sclerotic and cystic degeneration of the ovaries.

1. *Displacements.*—Goodell has related a number of cases of sudden misplacements of the uterus caused by the making of a misstep, or by jumping from the high old-fashioned stage coaches when the bladder had become, during a long journey, greatly over-distended.

* Read in a Symposium on the Prevention of Pelvic Disease, before the Ohio State Medical Society, at Cincinnati, May 9, 1901.

Many children are loath to give up a moment of their time at play to answer the call of nature, and the older ones are often compelled by their modesty or by unfortunate circumstances to withhold from urination beyond the measure either of comfort or safety. I see in this one of the most frequent causes of the backward displacement.

The habit of undue bending over of the body while sitting, together with the wearing of corsets, which modifies the direction of the intra-abdominal pressure, is another evil universally recognized.

2. *Endometritis.*—The mucous membrane lining the cavity of the uterus is just as liable to catarrhal processes as are like membranes elsewhere in the body, and more susceptible in fact because of the recurring hyperemia attending the menstrual flow. Acute suppression of the menses caused by sudden chilling of the body after prolonged exertion—as one so frequently sees the dancer in the interim between waltzes rushing to an open window for a breath of air—is a direct factor in the causation of an acute endometritis. "I caught cold while menstruating" is the too common phrase to which we have to listen.

This leads to the more chronic forms of endometritis—hypertrophic and hyperplastic glandular endometritis—which I more commonly meet in the virgin.

3. *Metritis.*—This in the young unmarried woman is fortunately less common, but there is a condition described by Mary Putnam Jacobi, and termed by her menstrual subinvolution, which leads to the same pathologic change as does subinvolution following parturition. This condition is seen as a sequence of endometritis in malpositions of the uterus, and is of such serious character that early interference is absolutely necessary to preserve the function.

4. *Ovarian Sclerosis.*—In the non-inflammatory, or as I would choose to term it, primary sclerosis of the ovary, there must be some active etiologic factor of which we as yet know nothing. I hesitate to believe with Osler that the fault lay in the material of which the parts are builded—an inheritance—but that the cause lay rather in some fault of nutrition in the child. It does, however, occur as a sequence to changes in the uterine structure.

PREVENTION.

This brings me to the discussion of the prevention of these disorders. There is no new thought which I can bring to bear to lighten the burden of the young woman.

I can only give added evidence of the necessity of wisely guiding her to a practical knowledge of the conditions which obtain through her often-repeated functionating cycles.

We must find fault with our civilization when we learn of the care which primitive peoples were wont to exercise over the young girl and the woman. It would seem that what they did from purely a religious duty we might be wise enough to attempt at least to carry out for the benefit of our state. It is said that among some of these early peoples it was a time of greatest moment when the young girl approached her first menstrual period, and most carefully was she protected and guided. They had especially designed huts where they were obliged to remain during each period in enforced idleness—not even being allowed to stand erect—their huts being too low to permit it. The Mosaic law compelled such an enforced retirement.

What a contrast to the almost total disregard which we to-day practice toward our children! Engelmann[1] says that "functional disturbances are least in the first years of pubertal development in the high school, increasing with each year, increasing in the normal school and college, increasing with intensity and seriousness of work." He refers to the New England woman as "supposedly more perfect than in any other section, intellectually above the average, but with a physique below par, with greatly reduced reproductive powers—all due to the forcing of study at the age of development."

Dress reform is spreading widely and rapidly; more attention is being given to the proper diet of the young; physical training forms a part of the curriculum of the public and private schools, but there is a tremendous waste of vital energy in the ever-increasing force toward mental acquirements—energy necessary to proper physical development, energy requisite for normal functional life.

"An ounce of mother is worth a pound of doctor," but the burden of responsibility should rightly rest upon the physician, whose care it should be that the mother understand the requirements of the developing girl, and appreciate the necessity of proper methods for equably distributing, during the years of growth and early maturity, the force which will round out her mental, physical and functional qualities.

1. Am. Journal of Obstet., December, 1900.

ISOLATION OF BACILLUS TYPHOSUS FROM UNUSUAL LOCALIZATIONS—CHOLECYSTITIS, MENINGITIS AND A FIVE MONTHS' FETUS.*

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The first case to be reported is that of the isolation of B. typhosus from a case of cholecystitis.

The patient, a physician, at the time of the attack was in attendance upon typhoid patients in a mild epidemic which occurred during the fall of 1900 in a mining district in the northern part of the state.

Through the kindness of Dr. R. E. Cutts, Minneapolis, it is possible to give the following notes from the history:

CASE 1.—Dr. G. A. C., male, aged 24. Family history is negative; there was no history of previous typhoid infection. Present illness began Sept. 30, 1900, with malaise and evening temperature of 100 F. On the second day the patient attended to his work but had some fever and pain in pit of stomach; no pain or tenderness of bowels. Symptoms continued, the evening temperature reaching 103 on the third day. Patient, however, continued his work until the fifth day, when he came to Minneapolis by rail, a distance of 300 miles, and was at once admitted to St. Barnabas Hospital. Specimen of blood taken on this day gave a positive Widal reaction, dilution 1.25.**

Next morning—the sixth day—patient was examined by Dr. J. W. Bell, and presented the following condition: Tongue was coated with a white fur, but not dry. There was marked pain and tenderness in the region of the stomach. Pain was constant, of a gnawing character, and was aggravated by the taking of liquids. During deglutition the pain was most marked about the cardiac orifice. No tenderness of bowels, no distension. Slight constipation, but otherwise stools normal. There

* Read at the Fifty-second Annual Meeting of the American Medical Association in the Section on Pathology and Bacteriology, and approved for publication by the Executive Committee: Dr. A. Stengel, W. S. Hall and L. Hektoen.

** The method used in this laboratory is that described by Woodbrook and Wilson. "The Serum Diagnosis of Typhoid Fever." Philadelphia Medical Journal, March 26, 1898.

was slight hacking cough, but no other evidence of pulmonary disturbance. Evening temperature 102.4, pulse 98.

On the seventh and eighth days condition remained much the same, the temperature ranging from 99.4 to 102.4. During the afternoon of the ninth day pain became more severe, and was most marked in the right hypochondriac region, necessitating the use of morphin. The pain gradually increased in severity, becoming localized in the region of the gall-bladder and intermittent in character.

During the night of the eleventh day the pain was so severe that one grain of morphin in three doses was given hypodermically with but moderate relief. On the morning of the twelfth day a distinct tumor apparently 4 to 5 inches in diameter was felt just below the liver. Blood count (Dr. G. D. Head) at this time showed 18,500 leucocytes. A diagnosis of cholecystitis with abscess formation was made by Drs. J. E. Moore and J. W. Bell and operation advised. An afternoon leucocyte count showed a decrease to 17,000 leucocytes.

On the thirteenth day the tumor was considerably reduced in size, the patient felt much better and operation was deferred. The improvement was but temporary; the intermittent pain continued with increasing tenderness in right hypochondriac region.

On the seventeenth day cholecystotomy was performed by Dr. J. E. Moore. The gall-bladder was found distended with a bile-stained mucoid fluid, that in the most dependent portion being slightly turbid. No calculi were found. There was a small amount of serous fluid posterior to the gall-bladder with a few very recent adhesions. Palpation of appendix and other abdominal organs was negative. Permanent drainage was established and the patient made a good recovery.

Cultures made from a portion of the fluid which was aspirated before incision into the gall-bladder showed an unmixed growth of an actively motile bacillus—B. typhosus—with the following characteristics:

Broth: Cloudy; no pellicle.

Dunham's peptone solution: Cloudy, no pellicle, indol reaction absent.

Capaldi-Proskauer solution: Red, at the end of 24 hours and remained red.

Litmus milk: Blue tint slightly lessened—no coagulation.

Dextrose agar shake: Small round colonies throughout—no gas.

Agar slant: Small, round, slightly raised, whitish colonies.

Litmus dextrose agar slant (M. S. F.†): Medium turned red at end of 24 hours; remained red.

Litmus lactose agar slant (M. S. F.†): Medium unchanged at end of 24 hours. After two weeks still unchanged.

Litmus saccharose agar slant (M. S. F.†): Medium unchanged at end of 24 hours. After two weeks still unchanged.

Litmus maltose agar slant (M. S. F.†): Medium turned red at end of 48 hours. (Slower than dextrose.)

Potato: Growth invisible except for moist appearance.

Reaction with blood of known typhoid patients was positive in every case in a dilution of 1 to 25 and also 1 to 100. A similar reaction with patient's blood was also present.

Pathogenesis: Intraperitoneal inoculation of 1 c.c. of a 24-hour broth culture killed guinea-pigs in less than 24 hours. At autopsy they showed marked peritonitis.

Within the past five years the literature of cholecystitis complicating and following typhoid fever has been carefully presented by several writers and Camac[1] in 1899 collected forty-three cases, in thirty-four of which B. typhosus was isolated. Since this publication a number of other cases have been recorded.

A study of the reported cases shows that symptoms of cholecystitis arising during the course of typhoid fever rarely occur as early as the tenth day, but most commonly between the twentieth and thirtieth days. Guarnieri[2] in 1892 reported a case of primary typhoid cholecystitis without intestinal lesions, which was verified by autopsy. Cushing,[3] Pratt[4] and others have since reported cases in which there seemed to be no lesions of the intestines.

In the case here reported the symptoms of gall-bladder involvement were marked early in the course of the illness. This fact, together with the absence of definite symptoms of intestinal typhoid including an atypical temperature curve, suggests the possibility of its being a case of primary cholecystitis unaccompanied by intestinal lesions.

The increased leucocyte count may have been due to the slight local peritonitis† which was present or to several small furuncles which appeared below the knee, one of which was opened three days after operation and yielded a pure culture of S. pyogenes aureus.

Hunner[5] has reported a case of typhoid cholecystitis occurring eighteen years after an attack of typhoid fever in which the leucocyte count was as high as 29,000. The anatomical findings in this case were parallel with those herein reported. These cases would seem to indicate the necessity for fuller observations concerning the leucocyte count in typhoid cholecystitis.

CASE 2.—The second case is that of the isolation of B. typhosus from a patient who developed meningitis following typhoid fever. The case occurred in the practice of Dr. F. R. Woodward, at Asbury Hospital.

Mr. N., a private in the 15th Minn., U. S. V., was taken sick during the epidemic of typhoid fever which occurred in the fall of 1898 at Camp Ramsey.

The patient had a mild run of typhoid fever in which the temperature but once reached as high as 102 F. The Widal reaction was present. The patient was discharged on the 38th day of the disease, the temperature having been normal from the 17th day except for a slight rise on the 23d day, which followed 12 hours after repeated doses of magnesium sulphate.

In the afternoon of the day in which he was discharged the patient returned to the hospital somewhat under the influence of liquor. (No particulars in regard to the patient's condition at this time could be obtained as the hospital records of this second illness together with the notes and autopsy record prepared by Dr. C. B. Lenont were lost.) Fever was present and symtoms of meningitis developed, the patient dying five days later.

Autopsy showed an extensive purulent inflammation of the cerebral meninges. Dr. H. E. Cotton collected in a sterile bulb purulent fluid from the base of the brain. Direct coverslip preparations from this fluid showed numerous small bacilli, some of which were within the polymorphonuclear cells. Cultures showed the only organism present to be a bacillus with all the characteristics of B. typhosus. This was, so far as can be determined, a meningitis due to unmixed infection with B. typhosus.

CASE 3.—Through the kindness and interest of Dr. Thomas S. Roberts, of Minneapolis, the opportunity and materials for examination were afforded in the third case which, as noted in

† M. S. F.—Agar rendered primarily muscle sugar free by inoculation with B. Coli communis as recommended by Theobald Smith.

1. Am. Jour. of Med. Sciences, March, 1899.

2. Contributio alla patogenise delli infezione biliari. Revista generale italiana di clinica medica, 1897. Ref. Baumgarten's Jahresbericht, 1897, p. 234.

3. Johns Hopkins Bulletin, May, 1898.

4. Jour. of Boston Soc. of Med. Sciences, April 23, 1901.

† It may be noted that an abundant growth of B. typhosus together with two or three colonies of a white coccus were obtained from a gauze sponge which was packed around the gall-bladder during aspiration, and the placing of stitches. Unfortunately a culture from the region surrounding the gall-bladder was not taken until this chance for infection from the gall-bladder contents had occurred. Presumably the typhoid organisms escaped from the gall-bladder during aspiration, and the few white staphylococci came from the deeper layers of the epidermis.

5. Johns Hopkins Hospital Bulletin, August-September, 1899.

the abstract, was that of the isolation of B. typhosus (?) from a five months' fetus.

Without apparent cause, the mother aborted one week after the beginning of convalescence from typhoid fever. The course of the fever had been typical and the Widal reaction was present in her blood as well as in that of the fetus.

No gross lesions were discovered in the fetus, but from its organs, peritoneal fluid and heart's blood, cultures were made immediately on receipt in the laboratory, i. e., 36 hours after delivery of the mother. It had been kept on ice in the interim.

From the spleen, liver and peritoneal fluid was isolated an organism which presented all the characteristics of B. typhosus with the one exception that it formed gas in the media containing dextrose. In the media which contained lactose, maltose or saccharose, in milk and other cultures and in every other respect it was indistinguishable from parallel cultures of B. typhosus.

It was actively pathogenic for guinea-pigs, in whom a fatal peritonitis occurred in less than twenty-four hours after intraperitoneal injection of 1 c.c. of fresh broth cultures, and from whose organs it was again recovered. Blood of known typhoid patients in a dilution of 1 to 25 reacted to this bacillus, though in about half of the cases the reaction was not quite so marked as with B. typhosus. This is, however, common in freshly isolated cultures of B. typhosus. It should be noted also that the blood of both mother and fetus reacted to this bacillus.

In addition to this micro-organism obtained from the spleen, liver and peritoneal fluid of the fetus there were isolated from both the spleen and liver two other organisms. One resembled B. typhosus in most respects, but did not acidify maltose, was feebly if at all motile and grew less abundantly than parallel cultures of B. typhosus.

The third micro-organism was non-motile and did not ferment any of the four sugars tested. It was found in the heart's blood also. From both peritoneal fluid and liver a fourth organism was obtained. It coagulated milk, acidified all of the four sugars without the formation of gas, but was, however, very short and somewhat resembled a diplococcus.

Further study of these four micro-organisms will be necessary before making a full report of the case. Identification of the three last mentioned has not been completed, though they are still under observation.

In consideration of all of its characteristics, can the first bacillus be considered as B. typhosus, which has undergone some modification in the fetus whereby ability to produce gas—in addition to acid—from dextrose was acquired?

It has been shown by Peckham[6] that B. typhosus may be led to produce indol by change in environment. Is the production of gas by a bacillus a greater departure from the recognized limits than the production of indol? Before answering this question finally it will be necessary to study more thoroughly the influence of fetal tissues, glycogen, etc., upon B. typhosus. The mechanism of the production of the positive Widal reaction in the blood of the fetus is explained in this case if it be possible to consider this bacillus an aberrant type of B. typhosus.[7]

B. typhosus has been reported present in the fetus by several observers who made no mention of a corresponding Widal reaction. Whether this was undetermined or absent was not stated. The presence of the blood reaction in the fetus has not been demonstrated in cases in which infection with B. typhosus could be absolutely excluded.

DISCUSSION.

DR. MAXIMILIAN HERZOG, Chicago—I have seen a few cases of peculiar localization of the typhoid bacilli, or peculiar complications brought about by it. A case of interest occurred in the practice of Dr. Maywit, Chicago. The case had been diagnosed at a certain stage as typhoid fever, and confirmed by a Widal test. The patient acting peculiarly, a probable diagnosis of tubal pregnancy complicating typhoid was made. An operation performed by Dr. F. Henrotin demonstrated the correctness of the diagnosis; a 4-week embryo and a ruptured tube were found. A long suppuration followed the operation and the pus examined showed the presence of bacilli identical in their morphology with typhoid bacilli. Pure cultures, unfortunately, were not made, but there is hardly any doubt that the long-standing suppuration was caused by the typhoid bacillus. I recently saw another unusual localization of the typhoid bacillus; the case occurred in the practice of Dr. Chew of Chicago. The patient, a young man 28 years old, had a typical typhoid fever, which ran its course. In the period of convalescence, a temperature again developed, and the objective symptoms of pleurisy became manifest. The pleural cavity was tapped, and some pus was obtained. This pus contained micro-organisms resembling typhoid bacilli. A subsequent careful examination of those bacilli by the usual culture method demonstrated them to be typhoid bacilli. The pleurisy took a somewhat protracted course, but the patient eventually recovered.

DR. F. F. WESBROOK, Minneapolis—In the first case reported by Dr. McDaniel we are led to ask, was this not perhaps an abnormal case of typhoid fever? Was there not something in addition to the cholecystitis such as some lesion of the intestine? I do not think this was excluded, although there was not very much after the operation to call attention to the intestinal tract below where the contents of the gall-bladder entered. I believe at that time the only thing to which special attention was directed was the immediate locality of the operation. Dr. McDaniel's second case was undoubtedly meningitis due to B. typhosus. In the last case to which Dr. McDaniel called attention, that of the 5-month fetus, one of the micro-organisms isolated showed the characteristics of bacillus typhosus in every respect but one, namely, the formation of gas. It undoubtedly was a pure culture. One is led to ask in how many respects must a bacillus be typical in order to be classed as bacillus typhosus. Is gas formation a fatal objection to such classification? This bacillus was typical in every other respect culturally, and in all points morphologically characteristic. It was pathogenic for guinea-pigs and reacted to the blood of known typhoid patients, while the blood of both mother and fetus reacted to B. typhosus and to this bacillus. These characteristics should probably more than offset the aberrant one of gas production, though, as Dr. McDaniel has stated, more work should perhaps be done before drawing final conclusions.

Dr. Herzog's remarks bring to mind a case which I have recently seen in which, some three or four months following typhoid fever, there developed a tumorous mass slightly below the left nipple and a little to the left of the median line. After some weeks an incision was made to the depth of half an inch and a small amount of pus obtained. Cultures of B. typhosus, typical in all respects and so far as could be determined, without admixture with any other mioro-organisms, were obtained. In this case and in the first two cases reported by Dr. McDaniel, the bacilli were unmixed and were characteristic in all respects. In Dr. McDaniel's third case there was a variety of possibly closely related organisms, none of which was absolutely identical in all respects with B. typhosus or B. coli communis. It is in such cases that we hesitate and the longer we work

6. Peckham: Journal of Experimental Medicine, vol. II, 1897, p. 549.

7. A number of interesting cases have been collected and three reported by Bolton, Journal of Pathology and Bacteriology, vol. vii, p. 137, Feb., 1901, bearing on the relation of the Widal reaction to infection of the fetus with B. typhosus. It may be noted that in Bolton's third case the organism isolated from the fetal organs formed indol.

with micro-organisms belonging to the typhoid and colon group the more careful we become in saying when and where we have to draw the line.

COLD WEATHER ACCOUNTABLE FOR TURBIDITY OF THE URINE.

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It is common to find a certain percentage of freshly voided urines to present, upon examination, a variable degree of clouding which may have for its cause many different conditions. Among the most striking of these are those dependent upon thermic fluctuations, and in this connection reference shall be made to the changes produced by exposure of the urine to a temperature near the freezing point. With the approach of marked climatic change and a decided fall in the mercury, the number of turbid specimens collected from private practice and dispensary clinics is greatly increased, while specimens collected from hospital patients are seldom influenced by cold. In the urines brought to the laboratory of the Philadelphia, Pennsylvania and Medico-Chirurgical hospitals during the fall and winter months, the writer seldom observed any increase in the number of turbid urines. It was often noticed in specimens brought by patients to the dispensary of the Howard and Medico-Chirurgical hospitals, as well as in those sent to the laboratory by physicians, collected from their private practices. It was further observed that where two specimens, a morning and an evening, were studied, the evening urine would be found turbid, while the morning specimen appeared normal, and when the morning urine was the older of the specimens the reverse was frequently found. It occasionally happened that the patient had inspected the urine before leaving home and noted its clearness, but after carrying the bottle exposed to the cold for a time, it was found turbid on reaching the laboratory. The common cause for this extreme turbidity is the presence, in such specimens, of amorphous urates which on exposure to certain thermic changes are thrown out of solution, the degree of turbidity and consequently the color and consistence of such urine varying in direct proportion to the amount of urates precipitated. The naked eye may detect a slight finely granular clouding of a grayish-white color, which on close inspection is indistinguishable from that occasioned by amorphous phosphates. This precipitate may become sufficiently dense as to present a thick, heavy, pus-like sediment at the bottom of the bottle, which is seen to rise in the form of a thick ropy cloud when agitated. More common is it to find the clouding of a reddish or yellowish tinge, in which case the opacity varies from that scarcely perceptible to that of a thick yellowish-brown or dark-red color with the consistence of syrup. On standing, the lower portion of the urine may be occupied by this sediment, while immediately above it is a narrow zone of either clear, cherry, or wine color, while the remainder of the urine is highly colored. Turbidity directly ascribable to urates is a common finding in the urine of persons suffering from rheumatism, acute bronchitis, tonsillitis and allied febrile conditions, but is by no means rare in the urine of those apparently in perfect health, and during the period of gestation. In nearly 400 specimens where the turbidity was in part or entirely the result of exposure to cold, it was found that the features above given were present to a variable degree. The specific gravity ranged from 1018 to 1045, while fully two-thirds of this number were between 1023 and 1033. In striking contrast to what is usually expected in turbid urines, these specimens were exceptionally free from albumin; but two of them showed this body (serum albumin) in considerable amounts. In none of the specimens was a positive reaction for sugar obtained. Fehling's and the fermentation tests were employed. On several occasions there were reactions which simulated that of glucose, with Fehling's reagent, but these were not typical and could not be confirmed by the fermentation test.

Turbidity or opalescence, the result of an excess of amorphous urates, disappears upon the application of heat. A test-tube is filled one-third to one-half its depth with the suspected urine, and the upper one-third of

the column of urine is passed over the flame of a Bunsen burner and heated to a temperature nearing that of the boiling point. The clouding due to urates disappears from the portion of the urine to which heat is applied, before the boiling point is reached, while the unheated portion of the column remains unchanged.—See illustration. By the addition of a few drops of acid to such urines we may cause the precipitation of uric acid, commonest in the form of rhombic plates, but this procedure can scarcely be regarded as one of practical value. In the teaching of clinical diagnosis there appears to be but few substances that are met with more frequently than the one here under discussion, and the reaction thus obtained proves a most satisfactory safeguard against confusion. The more common causes of turbidity to be differentiated from that due to urates are those dependent upon phosphates, bile pigments, pus, mucus, serum albumin with red blood

cells and many granular casts, and urines containing an admixture of vaginal secretions. It may be added that none of these substances clear upon the application of heat as herein outlined. In biliary urines it was commonly seen that the upper portion of the column cleared when heat was applied, but the color resulting from the bile pigments remained unchanged. Microscopic study assists in distinguishing, beyond any possibility of a doubt, substances likely to be mistaken for amorphous urates. However, we are forced to resort to chemical measures in differentiating between amorphous urates and amorphous phosphates. Albumoses coagulate at about the temperature at which urates are returned into solution, but it is improbable that it would be capable of conflicting in any way with this reaction.

ON THE TREATMENT OF OBESITY.*

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A rational therapy of polysarcia is only possible on the basis of a more precise differentiation between the principal types or degrees of this metabolic anomaly.

A number of authors have attempted to distinguish between the forms of corpulency. The classification of Immermann[1] into the plethoric and the anemic types, partly on account of a certain clinical justification, but mostly on account of its adoption by Oertel,[2] is the best known and enjoys universal acceptance by later writers on the subject. This differentiation, however, is one of degree more than of character, and, in advanced cases of obesity when pronounced degenerative changes have taken place, the one type can not be distinguished from the other.

Guided by the external appearance, Immermann assigns the cases to one of the two categories: 1, to the plethoric group he refers the instances occurring in the robust; 2, to the anemic class, those obese individuals who display a weakened muscular system. In the following I have delineated some characteristics of the two forms—in their extremes:

	PLETHORIC TYPE.	ANEMIC TYPE.
Occurrence:	more frequent in males;	more frequent in women.
Corpulency due to:	hyperingestion of foods and liquids;	deficient oxidation.
Appetite:	excessive;	impaired.
Appearance:	ruddy;	pale.
Endurance:	little if at all reduced;	excessively diminished.
Body temperature:	normal;	frequently subnormal.
Integument:	smooth, greasy;	rugose.
Muscular system and adipose:	firm;	flaccid.
Heart:	vigorous (bradycardia in advanced stage weak and arrhythmic);	feeble.
Arterial tension:	increased;	lowered.
Blood (hemoglobin and corpuscles):	abundant;	deficient.
Edema of lower extremities:	infrequent;	frequent.
Urine:	abundant;	diminished.
Accompanying conditions:	lithemia, oxaluria;	dyspnea.
Tendency to:	arterio-sclerosis;	hypostatic congestion of lungs.

It is obvious that in their extremes these two clinical pictures exist more infrequently than in their intermediate degrees—conditions of corpulency partly resembling the one, partly the other type. The vast majority of instances of lipomatosis belong neither absolutely to the "plethoric" nor to the "anemic" form, and therefore do not permit of a definite classification. Inasmuch as a differentiation is often impossible, the value of the Immermann-Oertel classification, for practical and especially therapeutic purposes, is quite limited and besides often problematic.

CORPOREAL SPECIFIC GRAVITY AND POLYSARCIA.

Sometime ago I attempted to demonstrate that the volume weight of the animal body discloses, with a high degree of certainty, the physical condition of its structures.[3]

Fat is the only important tissue constituent which possesses a lesser degree of density than water. Adiposis causes a reduction of the specific gravity of the organism, and that, in the same ratio in which the increase of fatty material has taken place. Polysarcia, however, in spite of its name—much flesh—is neither always dependent upon an increase of the corporeal solids nor upon the relation of protoplasm to fat; it is frequently but the consequence or the manifestation of tissue hydration, and of the increased contents of water in the organism. In other words, rotundity of the body may be due to an absolute increase of protoplasm, to one of protoplasm and fat, to an absolute increase of fat alone, or to an increase of the liquid tissue constituents either per se or together with fatty deposits.

The specific gravity of an individual in a given case of ploysarcia, is, therefore, dependent upon the following possible factors: 1, protoplasm +, total inorganic solids +; 2, protoplasm +, fat +; 3, protoplasm stationary, fat +; 4, protoplasm —, fat +; 5, protoplasm —, fat +, H_2O +.

It is not my intention to dwell upon the polysarcia-corporeal density relation at greater length. Some of my pertaining investigations will be published in the course of the year. Those who are interested in the subject, I refer to my article in the *Medical Record* of February 9, 1901. The few facts, however, which I have related in the foregoing make it evident that the Immermann-Oertel differentiation, as a basis for rational treatment, is without any doubt inadequate and superficial.

Classifications according to the increase in absolute weight, into very pronounced, moderate and slight corpulence, may serve a purpose, if denoting the obesity degree of a certain type. In differentiating between certain obesity forms, the degree classifications are illogical, and, to say the least, useless for therapeutic intents.

The determination of the volume weight of an individual would be but rarely practiced and the corporeal specific gravity would hardly ever become a factor in physical diagnosis if, to ascertain these, we were compelled to employ any volumetric device or tedious mathematical calculations. However, the density of the blood may well serve as an indicator of corporeal density. A series of observations on men, conducted by the writer, has pointed out that the volume weight of an individual in the physiologic as well as in the pathologic state, is reflected in the specific gravity of his blood. That is, that a high blood density corresponds with a high body density, and a non-transitory hydremic condition with a low corporeal specific gravity. Congruous density degrees of blood and body, it is true, were rarely found. Again, the deviation between the two specific gravities in every instance was so slight that it seems rather due to shortcomings in the methods utilized in ascertaining the densities of both blood and body, than to an abnormal

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*Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Materia Medica, Pharmacy and Therapeutics, and approved for publication by the Executive Committee: Drs. Thomas Hunt Stucky, Leon L. Solomon and N. S. Davis, Jr.

distribution of the fluid contents in the organism. The difference between the two densities in these observations amounted, on the average, to about six degrees in favor of the corporeal specific gravity. This figure six may be employed as a standard or coefficient, for the estimation of the volume weight of a healthy adult male from his blood density, by adding it to the latter.

Since reading my first article on the subject—October, 1900—I have had occasion to extend my observations upon the relation of total volume weight to blood density in the female organism. The data obtained are almost analogous to those I had found in males, and the same coefficient, six, is, for all practical purposes, sufficiently accurate for the calculation of the approximate volume weight from the blood density, in the normal female individual.

Again, fluctuations in the physical condition of the body are distinctly reflected in the physical condition of the blood. In the abnormal state, the permanent higher and lower degrees of blood concentration also correspond with a higher or lower specific gravity of the total organism. The various forms of polysarcia are no exception to this rule. The coefficient plus six, as I have convinced myself in a number of observations, may be also utilized in computing from the blood density the volume weight of the obese male or female.

I am in the habit of determining the type of obesity on the basis of the specific gravity of the individual. Accordingly I differentiate between:

1. Polysarcia concurring with a relatively high degree of corporeal specific gravity—hyperplasmic obesity or lipomatous hyperplasma.

2. Polysarcia associated with a normal or slightly diminished degree of body density—metabolic or common obesity.

3. Polysarcia associated with a lesser volume weight of the organism—hydroplasmic obesity, or lipomatous hydroplasma.

HYPERPLASMIC OBESITY OR LIPOMATOUS HYPERPLASMA.

Hyperplasmic obesity is the rarest type, forming, according to my notes, about 6 per cent. of all cases of corpulency. It occurs principally in male subjects, most often between the ages of 27 and 38. I have seen two or three instances of it in women. This form of polysarcia is the only one true to this name, inasmuch as the stoutness is caused by the augmentation of the body protoplasm alone. Corpulency of this type is never very pronounced; the increase in body weight but rarely exceeds 15 kilograms. The average surplus in absolute weight may be put down to 7 kilograms, about 15 pounds.

The polysarcia of this class is characterized by the following: Extreme firmness and strength of the muscles; dry skin; increased cardiac activity; high arterial tension, usually above 160 mg, Hg, by the sphygmomanometer, and high blood density. The latter amounts at least to 1064, but frequently to 1068 and above in the male, and to 1062 and 1066 and more in the female organism.*

The volume weight of the individual attains a considerable degree, which may be ascertained by adding the coefficient to the degree of blood density. It will be found that the corporeal specific gravity in hyperplasmic obesity is from 5 to 9 points higher than in the normal state.

This form of corpulency, not disfiguring or in itself weakening the system to any extent, demands our special attention on account of its complications. Among the latter, incipient nephritis and metabolic anomalies, as xanthemia, arthritis uritica, oxaluria are common. The one concomitant phenomenon invariably present, however, is that chronic condition which v. Basch[5] has designated as "latent arterio-sclerosis." The continued high blood pressure points to the existence of this condition. No other symptoms are indicative of latent arterio-sclerosis, for the moment such occur the affection is not latent any longer. The affection is not even in its incipiency, as there is neither polyuria nor albuminuria, whose presence one might infer to arterio-capillary fibrosis.

At the period when conspicuous anatomic changes symptomatic of arterio-sclerosis appear, which invariably are produced if proper treatment is not early instituted, the polysarcia has been transformed from the hyperplasmic to one of the metabolic types.

Again, as hyperplasmic obesity is always accompanied by latent arterio-sclerosis, we may well assume that this is not a mere complication of the former, but a condition arising from the same factor, and at the same moment as the polysarcia itself. Viewed from this point, hyperplasmic obesity is but a symptom of a certain systemic anomaly.

METABOLIC OR COMMON OBESITY.

Metabolic obesity is the most frequent type, forming, according to my statistics, about 68 per cent. of all instances of polysarcia. Its frequency is greater in males than in females, the ratio being about 5 to 2. It is an affection of middle life, but is not uncommon in well-fed children. In women I have never seen a case above the age of 65, a period of life when it is rare in males.

I distinguish two varieties of metabolic obesity, viz., one kind where an increase of body protoplasm concurs with an enlarged deposition of fat, the other in which adiposis is increased without synchronous augmentation of albuminous tissue constituents.

Its characteristics in general answer to those of the plethoric form of the older writers, heretofore described. There is no or almost no discrepancy between the corporeal density in this type of polysarcia and that of the normal individual. This is especially the case when both body protoplasm and fat are increased in a similar ratio in which they occur in the normal organism. The greater the increase of fat as compared with that of albumin, the lower will be the corporeal specific gravity. The least degree of body density in this form of obesity is found in those instances where the tissue albumin is neither augmented nor reduced, and where fatty matters alone have accumulated. The volume weight in metabolic obesity varies between 1062 and 1067 in males, and between 1059 and 1066 in females. These figures are arrived at by the addition of the coefficient six to the respective blood density.

While in this, the common type of polysarcia, the surplus in absolute weight is often considerable, it does not exceed 20 or 30 kilograms in the majority of instances. However, in the United States cases of 50 and 75 kilograms surplus become more frequent from year to year, especially in the large cities, where great distances have called forth ever ready transportation facilities, which in turn have given rise to abnormal body inactivity and in many instances to corpulency.

* A condition analogous to hyperplasmic obesity is occasionally observed in animals fattened by a special method. Müntz (Comptes Rend., Tome 142, p. 298, v. Limbeck) found a blood density of 1058 in fattened and one of 1038 in normal sheep. The dry residue of the blood of the fattened animals amounted to 20.33, that of the common sheep to 13.60 per cent.

In the same proportion in which the number of those who take their daily "constitutional" declines, the great family of the bodily unsound and the obese grows.

The chronic disorders concurrent with hyperplasmic obesity also accompany this type of polysarcia. Their presence is independent of the degree of corpulency as well as in a certain measure of its duration. However, the concurrent affections are usually more developed than in the hyperplasmic condition—latent arterio-sclerosis has yielded to incipient or pronounced arterio-capillary fibrosis; the heart in consequence is hypertrophic. The most clearly defined complications in metabolic obesity are due, to a certain extent, to the more advanced age of the patient, which, on the average, is about 10 years above that of the individual possessed of the hyperplasmic form of polysarcia. Again, the occurrence of accompanying conditions, which are almost as frequent as the main affection itself, forces us to consider metabolic obesity like the hyperplasmic type, as a mere phase or phenomenon in a general systemic deterioration.

HYDROPLASMIC OBESITY OR LIPOMATOUS HYDROPLASMA.

Hydroplasmic obesity is found in about 25 per cent. of all cases of polysarcia. It is most common in women and may occasionally appear at puberty. Normally, however, it occurs between the 35th and 48th year.

Among the principal characteristics of this type of obesity may be enumerated the following: Pallor eximius; flaccid adynamic muscles; wrinkled skin; flabby abdomen, inclining frequently over the genitals; low arterial tension; weak heart; low blood density; varicosis; edema, and scanty urination. The specific gravity of the organism is considerably lowered, which is evinced by the low blood density. Obese individuals whose volume weights are below 1060 in males and 1056 in women, that is, whose blood density is less than 1054 and 1050 respectively, belong to the hydroplasmic group.

We encounter here two varieties, namely, one in which the protoplasm is diminished and the fat alone increased, the other in which the loss of body albumin coincides with an increase in fatty substances and water. It is evident that the corporeal density of the obese in whom loss of albumin and increase in fat and water occurs, is somewhat higher than that of the individual of similar absolute weight in whom equal loss of tissue albumin but increase of fatty material alone had taken place.† In both eventualities, however, the volume weight would be subnormal, as the density of water is 1 and that of human fat 0.932.

The absolute weight in hydroplasmic obesity, although the patients appear exceedingly corpulent, as a general rule does not reach as high a point as in the metabolic type. An average surplus of kilograms as in the other types of polysarcia, on account of the great divergences in absolute weight in the individual cases, can not be consistently accepted.

Lipomatous hydroplasma, even in a greater measure than the other forms of corpulency, is not an independent affection, but a most conspicuous symptom of a general degenerative process. The latter is probably the same which stands at the foundation of the other classes of polysarcia. Hence, hydroplasmic obesity may be the direct and early result of a systemic degeneration, or it may be consequential to one of the other types of corpulency.

† It is doubtful whether an increase of fat material without one of water can ensue at all: the one variety is characterized by excess of water in the tissues, in the other variety the amount of water is also somewhat increased.

INDICATIONS FOR THE TREATMENT OF OBESITY.

All that has been heretofore stated tends to evince that obesity, irrespective of the type in which it appears, is not an affection per se, but a link only in a chain of symptoms pathognomonic of certain nutritional disorders, which in turn give rise to a slower or more rapid systemic deterioration. In so far as the amelioration of a prominent symptom is followed by an improvement in the general condition, the treatment of polysarcia, apart from some exceptions, is therefore always indicated.

As long as corpulency does not interfere with vital functions, a proper treatment is hardly ever instituted. It does not enter the mind of the otherwise still comparatively healthy obese to undergo unusual exertion or self-deprivation for the mere purpose of reducing the body weight. He does not care whether he weighs a few kilograms more, or less. Nowadays uncomplicated polysarcia, that is, where the concurrent phenomena are still obliterated and remain unrecognized, if treated at all is done for cosmetic reasons only. The vast majority of the corpulent do not consult a physician before the accompanying disorders and conditions compel them to do so. At this stage to be sure, the treatment, be it ever so well advised, can not accomplish what it would have afforded if instituted earlier in the course of the affection.

Cases of *hyperplasmic* obesity never attain the enormous increase in absolute weight which may occur in the other types. The over weight, not exceeding 15 kilograms in most instances, in itself does not call for any treatment. A surplus of from 10 to 15 kilograms in the adult well-developed individual may even be considered as within the physiologic limits, and, as a matter of fact, such individuals are accepted by the life insurance examiner. However, in hyperplasmic obesity we meet not only with an increase in absolute weight, but also with one in the specific weight of the organism. The concurrence of these factors in every instance is an indication of a systemic anomaly demanding treatment.

Hydroplasmic obesity, always denoting the presence of grave disturbances in the organism, irrespective of the amount of overweight in a given case, is *a priori* an indication for the institution of proper treatment.

In *metabolic* obesity, the common form, where there is no or practically no alteration in the corporeal density, treatment may not be absolutely indicated if the surplus weight is yet within physiologic range. A body weight 10 or 15 per cent. above the average may still be considered normal. In those cases, however, where the over weight exceeds 15 per cent., no matter how well the individual pretends to feel otherwise, treatment is urgent and should be insisted upon. Therapeutic measures should be taken before the concurrent affections have become too prominent a factor.

Besides old age and diabetes mellitus, there are few if any contraindications to the institution of de-adiposation.

At this point it is seasonable to mention something relating to the mean height and weight of both sexes in the different ages of life.

Guételet's figures, which are copied in all pertaining works, are based upon investigations and statistics concerning the French race and are certainly misleading if applied to the American people. Children and adults of both sexes on the average are taller and heavier in this country than are individuals of the same age in France. I have computed the appended table as follows: Height to 14th year inclusive, according to Monti*: weight to the 18th year inclusive, according to Cam-

erer.[7] The populations of Australia and Southern Germany present almost the identical physical characteristics. Those of the young Americans, if at all, differ but slightly. The remaining figures have been obtained partly by investigation and partly by comparisons and calculations.

AUTHOR'S TABLE DENOTING MEAN HEIGHT AND WEIGHT OF BOTH SEXES IN THE DIFFERENT AGES OF LIFE IN U. S.

Age.	Men.				Women.			
	Body, inches.	Height, cm.	Body, pounds.	Weight, kilo.	Body, inches.	Height, cm.	Body, pounds.	Weight, kilo.
1	28 74	73	21 78	9 9	28.50	72 4	20 24	9 2
2	32.67	83	28.16	12 8	32 44	82.4	24 60	11 2
3	35.82	91	32 70	14.9	35 59	90 4	29 04	13 2
4	38.15	97	36 68	16 9	37 95	96 4	33	15
5	40 55	103	39 60	18 0	40 31	102 4	35 20	16.
6	42.91	109	43 34	19 7	42.68	108.4	38 50	17 5
7	45.27	115	47 08	21 4	45.04	114.4	41 58	18 9
8	47 63	121	51.7	23.5	47.40	120 4	49 92	18.6
9	50.	127	55.60	25.3	49.76	126.4	49 06	22.3
10	52 36	133	60.94	27 7	52 13	132.4	54 56	24 8
11	54.33	138	66 40	30 2	54 69	137 4	58 52	26 6
12	56 30	143	72 60	33.	56 66	142 4	67 98	30.9
13	58 27	148	78 10	35 5	58.63	147 4	77 44	35.2
14	59.84	152	84 40	38 4	59.60	151.4	87 34	39 7
15	61 42	156	105 80	48 1	59.84	152.	97 02	44.1
16	63.39	161	120.10	54 6	60.	152 4	97 46	44.3
17	65 35	166	132 80	60.4	60 39	153 4	. . .	. . .
18	66 93	170	136.40	62.	61.18	155 4	. . .	. . .
19	67 32	171	138.60	63.	61 84	157.	118 80	54.
20	67.72	172	144.10	65 5	62 36	158.4	122 10	55 5
25	68 90	175	154.80	69.	63.15	160 4	124 30	56 5
30	69 29	176	154	70	63.58	162.	124 30	56.5
35	68.90	175	157 30	71 5	63 54	161 4	127 60	58.
40	68.90	175	166 60	73.	63 39	161.	133 10	60.5
45	68 11	173	161 70	73 5	62 99	160.	132	60.
50	67.72	172	156 20	71.	61 81	157.	128 70	58 5
55	67 32	171	151.80	69.	61.42	156.	126 50	57 5
60	66.93	170	149 60	68.	61 02	155.	126 50	57 5
70	66.14	168	145 20	66.	60 23	153.	117 70	53 5

GENERAL CONSIDERATIONS CONCERNING THE TREATMENT OF POLYSARCIA.

Lipomatosis universalis may have been caused directly either by excessive ingestion of nutriment or by its diminished oxidation in the organism, or by both eventualities together.

The caloric demand for the maintenance of the metabolic equilibrium is dependent upon the amount of work performed by the organism. The more the individual exerts himself, the higher must be the caloric value of his nourishment and vice versa; the greater the bodily inactivity, the less energy is expended, and the smaller need be the fuel supply of the organism.

A normal man utilizes on the average, for each kilogram of body weight per day when at absolute rest, 30 calories, of which 4.1 calories should be yielded by albumin. For each kilogram of body weight per day when leisurely occupied, 35 calories, of which 5 should be yielded by albumin. For each kilogram of body weight when moderately active, 40 calories, of which 6.1 should be yielded by albumin. For each kilogram of body weight per day when laboring strenuously, 45 calories, of which 7.2 should be yielded by albumin.

A man of 35, weighing 71.5 kilograms, for the maintenance of his metabolic equilibrium, should, therefore, consume daily an amount of foodstuffs yielding as follows: 2145 calories, of which 293.15 should be albumin calories, when at absolute rest; 2502.5 calories, of which 357.5 should be albumin calories, when leisurely occupied; 2860 calories, of which 436.15 should be albumin calories, when moderately active, and 3217.5 calories, of which 514.8 should be albumin calories, when laboring strenuously.

Roughly speaking, about the sixth part of the total calories needed by the animal organism should be derived from ingested albumins.

The same individual having changed his boarding house, continues to take similar nourishment in quantity and quality as before. However, instead of finding boiled potatoes on the table every evening, which he was accustomed to eat by simply adding some salt, he now is served three times a week with fried potatoes. The change, trifling in itself, is hardly noticed by him, but alas, after a few months his waistcoat becomes too narrow for him and he opens at first one, and as time progresses two and more buttons during the meals. Why does he do that? The fried potatoes contain at least 20 grams of butter; one gram of butter yields 9.3 calories. the 20 grams represent, therefore, a caloric value of 186. As he is now eating this dish three times a week, the surplus in calories amounts to $186 \times 3 \times 26$, or 14,508 calories in six months. Almost the total surplus of 1560 grams has been deposited in the organism in the form of fat, and, as adipose tissue contains about 40 per cent. of water, the total increase in body weight amounts to 2184 grams, about 4.5 pounds. In a year the surplus body weight would be 9 pounds, and if the individual chooses to partake of fried potatoes every day for a year his body weight would be increased from 71.5 kilograms, or 157 pounds, to 81.77 kilograms, or 179.5 pounds, during that period.

Assuming, on the other hand, that this same person, who was always moderately active, retires to a life of leisure, but continues to ingest daily an amount of foodstuffs valued at 2860 calories, he introduces about 350 more calories than can normally be burned up in his body. If the non-oxidizable surplus amounts to even but 250 calories, 26.4 grams of fat are daily deposited in the organism. In a year the increase in fat amounts to 9636 grams and that of adipose tissue to about 13,488 grams, or 29.6 pounds.

Before instituting treatment for polysarcia the following factors should be therefore ascertained: 1. Age and absolute weight of patient. 2. Approximate extent of surplus adipose deposition. 3. Degree of body activity other than that essential for the conduct of vital functions. 4. Caloric value of nutriment habitually ingested.

The first step in the actual treatment should be adjustment of the ingesta in accordance with the degree of muscular activity, or regulation of the latter with regard to the amount of calories yielded by the foodstuffs habitually consumed.

When we bring home to our mind the fact that in the obese the surplus weight in the vast majority of instances is due to fat alone, or to fat and water, we can readily understand that it is no easy task to definitely determine from the number of kilograms of body weight the nutrient calories actually needed by the organism. Intracellular fat and water usually neither participate in the general systemic metabolism, nor contribute towards the performance of muscular work. On the contrary, they are an absolute ballast to the individual, predisposing him to various diseases, especially epidemic ones, and impending more or less the vital as well as the muscular activity.

In calculating the necessary calories, at least in an approximate manner, it is best to ascertain the height of the patient, and, with the assistance of the appended table, the corresponding weight in kilograms. In most cases of metabolic obesity it suffices to multiply the number of kilograms thus obtained by 25, to learn the mini-

mum amount of calories daily needed. For instance, take the case of a male, aged 35, having an absolute weight of 95 kilograms, and height of 172 cm. The normal weight corresponding to 172 cm. height is 65.5 kilograms, therefore $65.5 \times 25 = 1673.5$, is the minimum amount of calories necessary to prevent the consumption of body albumin in this individual.

In hydroplasmic obesity, on the other hand, when starting with the treatment, the amount of food prescribed, whether its caloric value was compiled in the aforementioned or any other manner, always remains to a great extent a matter of conjecture. This type of polysarcia, it being virtually a condition of hypotrophy, frequently demands a diet of increased nutritive—not caloric—value. Diminution of absolute weight in hydroplasmic corpulency without concurrent increase in body density as evinced by the specific gravity of the blood, denotes deficient alimentation.

Patients under treatment for obesity should have their food carefully weighed and should be seen every third or fourth day, during the first two weeks, ten at least once a week for one or two months, and after that, fortnightly for a period of from three months to a year. On each occasion the patient should be weighed on an accurate scale, and, in the hyperplasmic and hydroplasmic types, the blood density should be ascertained at least once every two weeks, while in the metabolic variety it is sufficient to take it once a month.

Equally important as the decline in absolute body weight is the degree of blood and body density during the period of treatment. The blood density serves as the means of control, whether the measures which have been taken to reduce obesity are proper or not. For instance, a woman 157 cm. high, weighing 95 kilograms, and possessing a blood density of 1050, undergoes treatment. When seen at the end of a month she complains of extreme weakness, of emaciation and pains in the back and limbs, and of palpitation of the heart on the smallest exertion. She has lost during this time 7 kilograms in body weight. An examination of the blood reveals a density of 1048, a decline of 2 degrees since starting treatment. The diminished specific gravity of the blood, congruous, as we have repeatedly seen, with a lesser volume weight, denotes that the woman was underfed. Her subjective symptoms were probably all produced by underfeeding.

We should endeavor to accomplish the following in the treatment of the different forms of polysarcia:

In hyperplasmic obesity, reduction of absolute as well as of volume weight; metabolic obesity, reduction of absolute weight and maintenance of volume weight, and in hydroplasmic obesity, reduction of absolute weight and increase of volume weight.

The well-known dietary systems of Harvey-Banting,[8] Ebstein,[9] Oertel,[2] (Schweninger) Kisch,[10] and Hirschfeld[11] make no or but indefinite reference to the volume weight of the organism. There is no doubt but that all these regimens serve an admirable purpose in suitable cases. However, they are not applicable in all forms and degrees of obesity. Kisch and Oertel especially have recognized this when they prescribed different diet lists for the plethoric and the anemic types of the affection.

These dietary regulations possess the drawback in common that the patient is underfed, and that the calories elaborated from the prescribed nutriment do not suffice to prevent gradual consumption of the body protoplasm. I had occasion to observe in a number of instances that after ten or twelve days' employment of certain of these dietary systems, the amount of nitrogen egested surpassed that of nitrogen ingested. The large quantities of fat recommended in some of these regimens, although yielding large amounts of calories, may still not be sufficient to avert the loss of body protoplasm after the first or second week. The results of overfeeding can not be obliterated by systematic underfeeding. I am of the opinion that, apart from some exceptional cases, the employment of a diet valued at less than 25 calories per kilogram normal body weight, means, to say the least, unnecessary deprivation to a patient following his vocation. Cases treated according to Weir-Mitchell's or other methods of rest cure, where absolute inactivity is demanded, will undoubtedly get along with a smaller number of calories for a certain period. However, we have to deal, in the vast majority of cases, with people who are not only able but also should be up and about, and it must be our foremost aim to preserve the strength and resistance of these patients. A rational treatment of obesity can only be instituted on the basis of increased bodily exertion and oxidation and not on that of underfeeding.

There is a diversity of opinion concerning the amount of water necessary in the treatment of the obese. In the chapter on the "special management of the different types of polysarcia" the amounts of water per kilogram per day which I found best suited to keep up cellular activity to its fullest extent, are recommended for each specific form of the affection.

No mention is made in these lines of alcoholic and malted beverages. The latter are positively contraindicated in the treatment of obesity, and the former, which some modern authors permit in moderate amounts, although they possess high caloric values, I find, to say the least, entirely superfluous in the therapy of this as well as of all other pathologic states.

All measures which enhance the oxidizing qualities of the organism prevent further deposits of adipose tissue and contribute toward lipolysis. As long as the corpulent is properly fed, as long as he retains a certain amount of strength, such measures may be employed. Hydrotherapy, balneotherapy, mechanotherapy, gymnastics, etc., combined or alone, in any of their manifold variations, they all serve but one purpose—to increase the process of oxidation and the subsequent fat combustion. The selection of a mode of physical treatment when starting may be entirely left to the discretion of the patient. By permitting this the medical adviser gains the latter's good will, does not overburden him, and has no difficulty in adjusting the indicated measures later on. It requires great self-command on the part of many obese to continue and increase a certain method of exercise. This is especially the case when visible results do not immediately follow the first attempt.

Muscular exercise, whether passive, active, concentric or eccentric, is always essential in the treatment of lipomatosis. Even in cases of advanced hydroplasma, when the patient is compelled to stay in bed, massage and certain passive movements should be insisted upon. Active muscular exercise, as walking, climbing hills, rowing, boxing, bicycle riding, etc., are the most potent factors in increasing tissue oxidation. In every individual case the ability for exercise should be carefully ascertained. The patient must not be overtaxed in this respect, as this may call forth results which are analogous to underfeeding. As stated before, the patient may in the beginning select the mode of exercise which he intends to execute; his choice generally is walking on the level

ground. In cases in which cardiac asthenia is very pronounced, the form and amount of exercise to be taken is to be minutely described by the physician. In other cases, especially the metabolic variety, detailed directions are but rarely required. The amount of meters which the patient has to walk is to be increased from time to time. The robust may extend his promenade 1000 meters at a time; in the weak and hydroplasmic a gradual increase, say 100 or 200 meters at a time, will give the best results. Climbing, which may be indicated from the start for persons affected with the metabolic variety of polysarcia, should never be recommended as the initial form of exercise when the systemic deterioration has far progressed. Such cases should be handled with the greatest care—at first walks on the level and later climbing, but this in moderation only. It has been estimated that tissue combustion when climbing for the distance of one meter is ten times greater than when marching the same distance on level ground. In all instances of hyperplasmic and in many instances of metabolic lipomatosis, mountain climbing is imperative for curative purposes. In my experience, descending mountains or stairways has proven a valuable adjuvant in the treatment of polysarcia, principally in such instances where the over weight was considerable. It is true that the act of descending itself does not greatly intensify oxidation; this exercise, however, affords a most convenient means of stimulating the abdominal muscles to increased activity. The technique of descending exercise which I pursue is very simple. The patient is carried by the elevator to the fifteenth or twentieth story of an office building or other high structure. For the first week he is ordered to slowly descend the stairs, without holding to the banister. 10, 15 or 20 stories, as the case may be, from one to four times daily. During the second and third weeks this exercise is somewhat modified, the patient descends from step to step in a jumping manner, which produces a jolting of all the muscles of the abdomen. Later on the same exercise is continued, but the individual is ordered to perform it at his utmost speed. Athletic practices, so long as they do not overtax the strength or affect the heart and nervous system, are of a certain value in the treatment of all types of polysarcia. Of course proper gymnastic exercise has to be selected for each individual case. I prefer a course of calisthenics, especially such as are arranged for strengthening and developing the trunk, for they can not possibly do any harm and most of the movements may be readily executed. One of the most expedient exercises for the furtherance of systemic combustion is gymnastics of the lungs. The patient should be first taught to breathe properly. The inspiration should gradually become deeper and deeper until finally almost the whole lungs participate in the process. It is best to perform these chest-expanding exercises in the evening before retiring. I am in the habit of combining the lung gymnastics with air baths, that is, have the patient exercise while nude, and perform various muscular movements, the detailed descriptions of which I have to forego at this moment.

Besides diet and exercise a number of medicinal agents have been employed in the reduction of obesity. The following drugs and chemicals have been reputed to be anti-fat remedies: Iodin, and its preparations; phytolacca decandra; thyroid extract; vegetable acids; vinegar; lemon juice; alkaline, acidulated and sulphurous mineral waters; alkalies, as liquor potassæ; fucus vesiculosis; sodium chlorid; purgatives, and a legion more. Most of these have of late come into discredit, be it on account of their inefficiency and uncertainty of action, or on account of certain obnoxious results following their administration. It is my opinion, however, that most of these drugs, if given in sufficient amounts, bring about reduction of body weight. They act in large doses like certain poisons, the introduction of which is followed by emaciation, loss of strength, irritability, anorexia, insomnia and often chronic diarrhea. The majority of these are useless in small doses, and in large ones do not only produce dehydration and de-adiposation, but invariably also a melting down of body albumin. Their use, with the exception of a few, should, therefore, be unconditionally condemned, especially in instances of metabolic or hydroplasmic obesity. Some mineral waters, thyroid preparations whose action is modified, and fucus vesiculosis form the exception to this rule.

It is uncertain, apart from their aperient and laxative action, what the modus operandi of mineral waters, as those of Marienbad, Carlsbad, Kissingen, Saratoga, and the Hungarian waters, like Apenta, really is. Their influence in the rarest instances is a chemical one. The blood is not altered in its composition, at least not for any length of time after these waters are taken. Metabolism, however, increases under their continued administration. It appears as if the salt solutions exhibit physical functions by increasing the osmotic pressure in the organism. The acceleration of metabolic processes may be the direct consequence of the latter.

Thyroid therapy a few years ago seemed to be the panacea in the amelioration of obesity. But, alas, the indiscriminate use of the glandular substance by every one who wished to effect rapid reduction of his corpulency, was frequently followed by disappointment and by bad after-effects. In the wake of self-treatment by thyroid extract I have seen glycosuria in six or seven instances. The origin of at least two chronic conditions of glycosuria which came under my observation could be traced to thyroidism. Cases of digestive disturbances, extreme nervousness, jactitation and cardiac weakness were not infrequently met with after ingestion of thyroid substance. Most of these untoward symptoms noted after the use of thyroid occurred in persons who relied upon their own mode of administration.

On account of its uncertainty of action and occasional pernicious effects, the profession has abandoned thyroid therapy to a great measure. However, this means throwing away the good with the bad. Thyroid extract is by no means a necessity in the treatment of polysarcia, but it is a valuable adjuvant if used with precaution. Especially is this the case where the treatment is started and when some immediate results are to be accomplished. The idea of having lost a few pounds in weight during the first week, as a rule, tends to renew the patient's failing energy. Later on, when the obese is accustomed to his new mode of living, the thyroid preparation may be withdrawn. Unless the patient is under a regulated diet so that he is in perfect nitrogen balance, and his tissue oxidation is somewhat increased by suitable exercise, the drug should not be administered under any circumstances. Ewald[12] demands even an adequate surplus of ingested nitrogen in order that the thyroid preparation may accomplish the removal of adipose tissue without doing injury to the body protoplasm.

I have modified the action of the thyroid by the addition of arsenic and adonidin, thus:

℞. Acid arsenious	gr. 1/60	.001
Adonidin	gr. 1/12	.005
Thyroid gland, dry powder	gr. 2	.12

M. Ft. compressed tablet No. i.

Six years ago I first observed that arsenic exerts a specific influence upon the activity of thyroid. Patients who took an arsenical and thyroid preparation synchronously never complained of any deleterious effects, while those who were treated with thyroid alone occasionally exhibited such symptoms as I have mentioned. So pronounced was the modifying power of arsenic that in the course of time I never prescribed thyroid preparations without adding arsenic in some form. My observations have been confirmed by those of Bédart and Mabille,[12] who did not find palpitation, tremor, etc., following the administration of thyroid if Fowler's solution—2½ drops per kilogram—was given simultaneuosly. Adonidin is added to the combination to further strengthen the heart and enable the patient to continue the prescribed exercises.

Fucus vesiculosis (bladder wrack) I found an innocent and efficient fat absorbent to be used in conjunction with proper diet and exercise. I have devised a citric acid tincture of the drug which serves an excellent purpose in preventing the recurrence of a previous state of obesity. One of my patients, aged 35, an actress of national fame, in spite of a proper diet and a good deal of exercise, would have attained such an embonpoint that she could not have followed her calling were it not for the citric acid tincture of fucus vesiculosis which she has taken for four years. She is and has been in absolute nitrogen equilibrium, possesses great powers of resistance and carries her 85 kilograms with graceful ease.

SPECIAL MANAGEMENT OF THE DIFFERENT TYPES OF POLYSARCIA.

Hyperplasmic Obesity.—Objects to be attained: Reduction of absolute and volume weights; diminution of arterial tension, and increase of body oxidation.

Diet: There should be given for each kilogram of normal body weight during twenty-four hours of albumins 1.3 grams or 5.33 calories, carbohydrates 1.8 grams or 7.38 calories, and of hydrocarbons 1.3 grams or 12.09 calories, a total of 24.80 calories. The quantity of water should be 60 c.c. Thus for a hyperplasmic male, aged 35, absolute weight of 80 kilograms, height 172 cm. (normal weight corresponding to 172 cm., 65.5 kilograms) the calories required for the patient in twenty-four hours would be 1637.5, as follows:

Albumins, 85.15 grams, or 349 calories; carbohydrates, 117.9 grams, or 483 calories, and hydrocarbons, 85.15 grams, or 792 calories, in all 288.2 grams, or 1624 calories. The amount of water would be 3930 c.c. These 1600 calories and 4 liters of water should be divided up thus:

Meal hours.		Albumins, grams.	Carbohydrates, grams.	Hydrocarbons, grams.	Water, c.c.
Breakfast, 7 a. m.	2 cups of tea or coffee, 10 c.c. fresh milk in each cup—no sugar	0.7	1.	0.7	520
	2 boiled eggs	12.6		12.1	
	35 grams rye bread, 8 grams butter	2.7	14.9	6.8	
10 a. m.	2 glasses of water				500
Lunch, 1 p. m.	500 c.c. clear soup	5.		7.5	500
	100 grams boiled beef	35.		23.	
	100 grams spinach	3.5	4.5	0.5	
	50 grams Roman salad, 5 c.c. olive oil	1.1	1.8	5.	
	70 grams wheaten bread	4.9	39.6	0.4	
	100 grams apples, fresh	0.4	17.		
	Demitasse coffee, 2 glasses water				600
4 p. m.	1 glass of water				250
Supper, 7 p. m.	250 c.c. clear soup	2.5		3.7	250
	2 boiled eggs	12.6		12.1	
	70 grams wheaten bread, 15 grams butter	5.	39.6	13.	
	1 cup of tea, 2 glasses of water				750
Before retiring.	2 glasses of water				500
	Total	86.	118.4	86.8	3870
	Calories	352.6	485.4	807.2	

The nutriment should contain the same amount of albumins, carbohydrates and hydrocarbons for at least six months. If after six months the body weight has been diminished and the corporeal density has attained a normal degree, the caloric value of the diet may be increased from 15 to 40 per cent. However, for about one week in every month, for about one year thereafter, if need be forever, the original diet must be followed. In regard to the water, 60 c.c. in twenty-four hours, for each kilogram of body weight, should be taken till the volume weight has definitely declined to a normal degree.

Exercise.—The patient should walk two or three miles after breakfast, one mile after lunch, and three miles after supper every day. A bath at a temperature of 72 F. (22.2° C.) should be taken three times a week, preferably before retiring. This exercise is to be continued for one or two years, or a longer period.

Medicines.—From 3 to 5 of the compound thyroid tablets, as given above, should be prescribed for about ten days; thereafter 3 tablets a day for a week in each of the following five months are to be given.

Metabolic Obesity.—Objects to be attained: Reduction of absolute weight; maintenance or increase of corporeal density; diminution of arterial tension, and increase of bodily oxidation.

Diet.—For each kilogram of normal body weight for twenty-four hours there should be taken of albumins 2.6 grams or 10.66 calories; carbohydrates 1.6 grams or 6.56 calories; and of hydrocarbons 0.8 grams or 7.44 calories; making altogether 24.96 calories. The patient should drink in that time 45 c.c. of water. Therefore a male, aged 35, affected with metabolic obesity, whose absolute weight was 90 kilograms and height 172 cm. (normal weight corresponding to 172 cm., 65.5 kilograms), should have in twenty-four hours 1637.5 calories, as follows: Albumins, 170.3 grams, or 698 calories; carbohydrates, 104.8 grams, or 430 calories; hydrocarbons, 52.4 grams, or 487 calories; in all 327.5 grams, or 1615 calories. The amount of water to be 2947 c.c. These 1600 calories and 3 liters of water should be divided up thus:

Meal hours.		Albumins, grams.	Carbohydrates, grams.	Hydrocarbons, grams.	Water, c.c.
Breakfast, 7 a. m.	500 c.c. milk, heated to 100° F	17	24.	18.3	440
	1 roll, 30 grams	2.6	19.		
10 a.m.	250 c.c. buttermilk	10.	9.	0.7	230
Luncheon, 1 p. m.	500 c.c. clear soup	5		7.5	480
	300 grams roast beef, very lean	100.		7.5	
	250 grams asparagus, little vinegar	4.5	6.5	0.5	
	30 grams wheaten bread	2.1	17.		
	Demitasse coffee, 2 glasses water				600
4 p. m.	1 glass of water				250
Supper, 7 p. m.	250 c.c. bouillon with 1 egg	8.8		9.1	250
	30 grams hand cheese	10.9		1.7	
	250 c.c. skimmed milk	8.1	11.6	2.5	230
	30 grams wheaten bread, 5 grams butter	2.1	17.	4.2	
Before retiring.	2 glasses of water				500
	Total	171.1	104.1	52.6	2970
	Calories	701.5	426.8	489	

A nutriment of the same caloric value and possessing the various ingredients in similar proportion, I find best suited for both varieties of metabolic polysarcia. This dietary should be kept up as long as possible, in no instance for less than three months. The purpose of a regimen, like that of the whole treatment advocated, is rather to effect physiologic reduction of obesity than rapid cure of it. It is evident, therefore, that the stricter and longer the diet is adhered to, the better and more lasting will be the results obtained.

Water.—The variety of metabolic obesity characterized by normal volume weight, where we have an increase of protoplasm together with fat, demands each day about 45 c.c. of water per kilogram of normal body weight, and this for a protracted period. In the other variety, where the deposition of fat alone is enlarged, the amount of water should be reduced to 30 c.c. a day per kilogram of normal body weight between the third and fourth weeks, and to 20 c.c. per day for each kilogram normal weight after two months. Soups and milk have then to be abandoned, partially or altogether, and the amount of nutrient thus withheld should be replaced by eggs or meats. However, for one week in each month, 45 c.c. of water a day per kilogram of normal body weight should be taken. Scales and hydrometer, as pointed out before, are to be employed whenever possible. Loss in absolute and increase in specific weight, denotes the effect of diet in the latter variety of metabolic obesity. In some of these cases, it is true, partial withdrawal of water from the onset of treatment will give quicker results, but the tendency to arthritis uritica, etc., especially when under such a highly albuminous dietary regimen, must always be taken into due consideration.

Exercise.—There is no type of polysarcia in which exercise in its various modifications is so much indicated as in metabolic obesity. A diet valued at 25 calories a day per kilogram of normal body weight is just sufficient to prevent underfeeding. Without a proper amount of exercise, therefore, such a nutriment may avert further increase in body weight, but it does not call forth the desired decrease, at least not in instances of highly-developed obesity. The cases in which augmentation of fat is proportionate to that of protoplasm in the greater part, require similar exercise to those of hyperplasmic obesity. But we have seen that the degree of polysarcia of the latter type is rarely as high as that of the metabolic corpulency, and, in the degree in which the obesity is more pronounced, the amount of exercise must be increased.

Walking, climbing hills, rowing, bicycle riding, boxing, wrestling, etc., each and all may be advantageously utilized. When beginning treatment the mode and amount of exercise may be left to the inclination of the patient. Later on, however, the exact amount of exercise has to be adjusted to the needs of the organism from week to week. It is best to start with the amount of exercise recommended for the hyperplasmic type and to increase gradually so that the patient may lose from one to three pounds a week. In the ratio in which the absolute weight declines the amount of exercise must be increased or diminished. The nearer the body weight approaches the standard, the less exercise should be taken; yet daily walks of prescribed lengths should continue to be taken even after the individual has attained a normal weight.

There are always cases of this class which, to all appearances, do not yield, where exercise and diet in the beginning of treatment do not seem to exert the slightest influence upon the body weight. Nevertheless, I have not seen a single instance in which proper treatment ultimately failed. The latter must not be discontinued under any circumstances. The results will be obtained, in the one case, soon, in the other, later.

The variety of the metabolic type in which there is an accumulation of fat only, in respect to exercise, should be managed on somewhat different lines. There are cases in which, as we may assume, *a priori*, the heart is always more or less involved. Although this may not be determinable without difficulty in every instance, I usually start with the descending exercise described heretofore. After the first or second week calisthenics are recommended, at first such movements as tend to strengthen the lower extremities, later such as are designed for the upper extremities and the trunk itself. At the same time gymnastics of the lungs should be insisted upon. After the third week walking in moderation should be begun. This is to be gradually increased and climbing or rowing may be added after another month or so. Calisthenics and the like should not be discontinued, but should be executed every evening before retiring. Resistance exercises should be only resorted to where the condition of the heart peremptorily prohibits any other movements.

The hydrotherapeutic measures, Turkish, Russian and Nauheim baths, deserve consideration in suitable cases. Baths at 86 F., with or without salt, also sea baths during the heated season, as a rule, may be indulged in ad libitum.

Medicines.—For the variety in which protoplasm and fat is increased, compound thyroid tablets, 3 or 4 a day, for two or three weeks, should be taken; then continued in the same dose at intervals of two weeks for one week at a time, and to be continued for from three to six months. For that variety in which fat alone is increased, compound thyroid tablets, 3 a day, for eight or ten days. Thereafter 2 tablets every other day for a month.

Hydroplasmic Obesity.—Objects to be attained: Reduction of absolute weight; increase of corporeal specific gravity; augmentation of tissue oxidation, and increase of cardiac tonus.

Diet.—Per kilogram of normal body weight for 24 hours should be of albumins 3.4 grams or 13.94 calories, carbohydrates 1.6 grams or 6.56 calories, and of hydrocarbons 0.5 grams or 4.65 calories, a total of 25.15 calories. The amount of water should be 20 c.c. Thus a female, aged 35, affected with hydroplasmic obesity, whose absolute weight was 87.5 kilograms, height 159 cm. (normal weight corresponding to 159 cm., height 56 kilograms), requires in twenty-four hours 1400 calories, as follows: Albumins, 190.4 grams, 781 calories; carbohydrates, 89.6, 367 calories; hydrocarbons, 28 grams, 260 calories; a total of 308 grams, or 1408 calories. The amount of water should be 1120 c.c.

These 1400 calories and 1100 c.c. of water should be divided up thus:

Meal hours.		Albumins, grams.	Carbohydrates, grams.	Hydrocarbons, grams.	Water, c.c.
Breakfast, 9 a.m.	150 c.c. tea, without milk or sugar				150
	125 grams cold lean roast beef	46.		3.1	
	40 grams dry toast, 60 grams wheaten bread untoasted	4.	34.		
	150 c.c. clear soup	1.5			150
	6 oysters, blue points—60 grams	5.4	3.8	1.2	
Luncheon, 12 m.	200 grams boiled, broiled or roast meat—very lean	70.		5.	
	500 grams vegetables (Brussels sprouts, savoy, red or white cabbage, spinach, cauliflower, string beans, asparagus, prepared without flour or fat), average	13.4	24.5	1.8	
	170 c.c. lemonade, 1 lemon and 3 grams sugar		3.		170
3:30 p. m.	150 c.c. coffee, without milk or sugar				150
Supper. 7 p. m.	90 grams cold beef	33.3		12.3	
	2 eggs	12.6		12.1	
	50 grams rye bread	3.	24.6		
	150 c.c. tea				150
On retiring and during night.	150 c.c. water				150
	200 c.c. water				200
	Total	189.2	89.9	27.5	1120
	Calories	775.7	368.6	255.8	

A nutriment very abundant in albuminous material is best suited for instances of hydroplasmic obesity. The calories elaborated and yielded by the proteids should surpass both those derived from the carbohydrate and hydrocarbon ingesta together. While in the normal state but the sixth part of all calories should have emanated from nitrogenous substances, more than half of the total heat units in hydroplasmic polysarcia must be liberated by that source. The ratio of carbohydrates to hydrocarbons in this specific diet in physiologico-chemical respects is immaterial; for practical purposes, however, in order to facilitate the continued ingestion of large amounts of proteids, the absolute weight of the carbohydrates should exceed that of the hydrocarbons at least three times. A diet offering this composition should be continued for months, or, if need be, years. It contains, on the one hand, sufficient elements for the protection of or even increase of the body albumin, and, on the other, not enough of that kind of material which prevents disintegration of adipose tissue.

That proteids are the rational nutriment in this condition is evinced by the increased heart action following their supply. When the circulatory apparatus again performs its functions with sufficient vigor the body density will soon attain a normal degree. The decline of body weight in this form of polysarcia is of secondary consideration, the most potent factor to be accomplished is increase of body density. The patient, after being properly treated for some months, may present a totally different appearance. His rotundity may have disappeared, his cheeks may have sunken in, and in spite of these facts he may have lost but a few kilograms in absolute weight. His muscular system, in the meantime, has become firmer, while fat and water have slowly disappeared. The patient in this condition, being no longer hydremic, belongs to the second variety of metabolic obesity, and, although the diet for hydroplasmic polysarcia should be continued for a more or less protracted period, the exercises designed for that variety should be employed in order to gradually effect the reduction in absolute weight.

Water.—The relative great quantity of water contained in the hydroplasmic organism, *a priori* contraindicates the introduction of much liquid. The amount of water necessary per day and kilogram was estimated by the writer to be 20 c.c. A still more limited water supply, as is recommended by some authorities, I admit is followed by the rapid loss of a few kilograms of body weight. However, this occurs by dehydration only, while the fat deposits themselves are not altered. Total withdrawal of liquids, as shown by Niederstein,[14] is followed by decline in body weight. The latter increases soon after water is again taken. The early increase after the taking again of liquids, is due to the retention of water. The artificial and rapid concentration of blood serum and other body fluids may cause emaciation by starvation, but is certainly not followed by a physiologic reduction. The elimination of water from the tissues can be successfully accomplished—successful in the sense of removing the underlying cause—by but one means, the increased tonicity of the heart. By rapid concentration of serum the latter will never be realized. A certain amount of water is necessary in order that the tissues derive the utmost benefit from the organic as well as the inorganic ingesta.

Exercise.—As already pointed out, the exercise devised for the second variety of metabolic obesity serves well in this form of polysarcia, provided that the individual, by dietary treatment and by exercise described in the following, has already attained a more normal degree of density.

In starting treatment most stress should be laid on passive and resistance movements. Faradism, massage, mechanotherapy, in short, all methods contributing toward the improvement of the circulation will be followed by most beneficial results. The employment of cold hydropathic procedures, resulting in increased oxidation of fatty material, and the systematic performance of lung gymnastics, are other suitable means in the combatment of hydroplasmic obesity.

Medicines—For the heart, strychnin; for the blood, iron, and for the intestinal tract, beta napthalin, bismuth salicylate or hydrastis canadensis. To relieve constipation, saline enemata, podophyllin, leptandrin or calomel may be given.

Thyroid, as a general rule, is contraindicated in hydroplasmic obesity.

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THE MODERN SUBJECTION OF SCIENCE AND EDUCATION TO PROPAGANDA.*

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One of the sad pages in the history of science and education is that which relates how, on the death of Alexander the Great, the teacher of his youth, the much greater Aristotle, rightly regarded by the Middle Age as the "master of those who know" when more than sixty years old was driven from Athens into exile by a patriotic propaganda of the anti-Macedonians. A darker and a bloody page tells how Hypatia of Alexandria, the beautiful and learned daughter of Theon, was cruelly and brutally murdered in a Christian church in the year 415 of our era as a victim of a fanatical propaganda against paganism, condoned, if not conducted, by the Christian Archbishop Cyril, Patriarch of Alexandria. Copernicus hesitated long before publishing his splendid discoveries on the movements of the heavenly bodies and the heliocentric theory, for fear of ecclesiastical interference, and when soon after Galileo, more bold, promulgated the truth that Copernicus had hesitated to pronounce, both he and his discoveries fell under the severest ecclesiastical condemnation ever visited upon any man of science for the truth alone.

In our own time we have too often heard of sects which place the propaganda of a special faith before either science or education, and inquire more carefully into the orthodoxy of professors and pupils than into their scientific or educational attainments. However much we may regret such action we can not legitimately complain so long as the sectarians in question confine their actions to sectarian schools, colleges

* Abstract of the President's Address delivered before the American Society of Naturalists, Jan. 1, 1902.

and universities, supported exclusively by private means, for the right to regulate education within the home, the family, the private school or the private college or university, is a fundamental and inalienable right of a well-regulated democracy

The century just closed has witnessed a remarkable liberation of natural science and education from dogma. Geology was first set free by Lyell and his school, and then biology, by the discoveries of fossil man, and the splendid inductions of Darwin. Slowly but surely the teaching of natural science, which, like all teaching, follows closely in the footsteps of discovery, has also cast off its chains and freed itself from the subjection of theology. But as the church has declined in temporal power the state has become supreme, and with the recognition of its power has come the belief in its sufficiency—even its sufficiency to remedy all ills, real or imaginary—and scarcely had science and education freed themselves from the bonds of the church before they began to be threatened with subjection by the state,, a subjection sought for not by theologians but by philanthropists and philozoists.

THE ANTIVIVISECTION MOVEMENT.

The first in the field were the philozoists, commonly known as antivivisectionists. In former times charges of cruelty brought against scientific men would have been referred to an inquisition when such an institution existed, but now, the church being powerless in such matters, appeal must be had to the state. Accordingly, a propaganda was started, first, so far as I am aware, in England, but afterwards spreading to this country, which by 1875 had succeeded in bringing into complete subjection in Great Britain animal physiology, then the principal experimental biological science. Since that time a new biological science, bacteriology, has sprung up and found itself hampered also in some of its most important and most humane investigations by the same British statute, enacted on demand of the philozoic propaganda.

Anyone may read in the 29th chapter of the admirable Life and Letters of Professor Huxley, edited by his son, how, in 1870, when president of the British Association, Huxley had been violently attacked for speaking in defense of Brown-Séquard, the French physiologist, and how in the same year a committee had been appointed by the British Association, and reported upon the conditions under which they considered experiments on living animals justifiable. When legislation seemed imminent Huxley, in concert with other men of science, interested himself in drawing up a petition to Parliament to direct opinion on the subject and provide a fair basis for future legislation. A Royal Commission was finally appointed, with Huxley as one of its members. Early in 1876 the Commission reported and a few months later Lord Carnarvon introduced a bill entitled "An Act to amend the Law relating to Cruelty to Animals." "It was," says Mr. Leonard Huxley, "a more drastic measure than was demanded. As a writer in *Nature* (1876, page 248) puts it, "The evidence on the strength of which legislation was recommended went beyond the facts, the report went beyond the evidence, the recommendation beyond the report, and the bill can hardly be said to have gone beyond the recommendations, but rather to have contradicted them."

. . . . . .

Looking back over more than twenty-five years of the practical working of this law we can affirm without hesitation that under its operation both physiological science and physiological education have been kept by the state, or rather by the propaganda which secured the passage of the statute, under a needless and injurious subjection. . . .

In Massachusetts repeated attempts have been made to secure legislation "regulating" vivisection. An antivivisection propaganda is constantly maintained in Boston, and for several successive years bills aiming at the "restriction" or "regulation" of vivisection have been introduced into the legislature by the propagandists, but, having been vigorously opposed by medical and scientific men powerfully aided by such public-spirited citizens as the president of Harvard University, the president of the Massachusetts' Institute of Technology and the Bishop of Massachusetts, they have hitherto failed ignominiously. All sorts of restrictions have been suggested, and in the latest bill it was proposed to endow the agents of any society for the prevention of cruelty to animals with powers of entrance and search, so that they might visit any laboratory at any time, taking names and otherwise interfering with the freedom of research and instruction, as well as infringing upon the individual liberty of persons engaged in experimentation upon animals. If such a law had been passed, the subjection of science to propaganda in Massachusetts would to-day be even more complete and more intolerable than it has been in England since 1875.

I need not recount the recent attempt of those engaged in this propaganda to secure restrictive legislation for the District of Columbia. Suffice it to say that the attempt was one of the boldest and most dangerous attacks upon the freedom of research which has ever been made in America.

Nor is this all. Some of those engaged in the antivivisection propaganda seek, at the same time that they would abolish vivisection, to do away with all dissection of whatever sort in public schools of whatever grade. No one in his senses desires vivisection in the public schools except, perhaps, in normal schools devoted to the education of teachers. But dissection of clams, oysters, lobsters, starfish, sea-urchins, worms, snails and possibly fishes and frogs, are not only not necessarily out of place but may even be very useful and desirable in high schools and normal schools. My own feeling is that in grammar schools and all schools lower than high schools instruction should be confined almost wholly to the external structure of plants and animals, with their occurrence, habits, habitats and the like; but I see no good reason why in high schools and normal schools the elements, at least, of the internal structure of invertebrates and even of certain vertebrates may not well be taught. I have taken some pains to secure upon this point the opinion of a number of teachers of natural science in normal schools, most of whom have also been teachers in schools of lower grade, and with one or two exceptions I find they are strongly of the opinion that a moderate amount of dissection is not only desirable but almost indispensable.

Yet in 1895 the American Humane Association published in Chicago a report on vivisection and dissection in public schools, in which various excellent persons unhesitatingly affirmed that dissection in public schools is superfluous, and that physiology can be well enough taught by means of manikins, pictures and the like. In particular, several bishops, apparently regarding themselves as qualified to give evidence on this subject, stated without hesitation that all that is necessary in the practical teaching of physiology is illustrated books, manikins, etc., some even going further and saying that dissection must inevitably blunt the sensibilities and corrupt the character of the young. Cardinal Gibbons, of Baltimore, however, was more cautious when he said: "I am inclined to think that sufficient instruction can be imparted by the use of illustrations and manikins. I think it advisable to give children the knowledge, as Scripture does, of the God-given power of man over the lower forms of life; but they should be warned that this power is not absolute, arbitrary or cruel." In reading the pronouncements of the American bishops referred to, one is reminded of the occasions for Huxley's frequent and contemptuous sneers at the bishops of his own land with whom he so often did battle with delight. . . .

This perhaps is as good a place as any in which to urge upon all those within sound of my voice, or before whom this subject may come upon the printed page, and who desire to keep intact the freedom of science and education, the necessity of watching, in season and out of season, to repel the attacks of that propaganda which would not only compel all practical instruction in physiology to be based upon pictures and manikins, but would also prohibit altogether all experimentation upon animals, whether in physiology, bacteriology or experimental medicine. Science in Great Britain, as has already been stated, has been brought under an almost intolerable subjection by the antivivisection propaganda. In America, though long threatened, this has not yet come to pass; but unless naturalists everywhere are on their guard they will some day be taken by surprise, very much as the English naturalists seem to have been, and be brought under a similar subjection to the same hostile propaganda.

TEMPERANCE PHYSIOLOGY.

But if in America we can rejoice that we have thus far resisted the onslaughts of philozoists upon experimental science, we must confess with sorrow that we have been less fortunate in dealing with philanthropists, in an important department of elementary education. When, in 1842, Horace Mann published his still excellent essay on "The Study of Physiology in Schools," he seems, judged by recent school statutes of the several United States, to have made one serious omission, for he nowhere mentions or even foreshadows that remarkable creation of our own times, "temperance physiology," and very likely with some old-fashioned people of to-day, he regarded temperance as chiefly a moral question.

The discovery of this new and entirely modern branch of "science" and "education" seems to have been the joint work of Dr. (afterwards Sir) Benjamin W. Richardson, of England, an able but erratic physician, and Mrs. Mary H. Hunt, formerly of Hyde Park, Massachusetts, and now of Boston. At any rate, Mrs. Hunt refers to Dr. Richardson as the author from whom she drew some of her original inspiration, but her own achievements, in organizing and directing the propaganda now associated with her name, have so far outrun anything done for it at the outset by Dr. Richardson that we must regard her, and not him, as the true creator of this astonishing movement. Mrs. Hunt says that her mind was turned to the subject in the early seventies and that she soon found in Dr. Richardson's "Cantor Lectures on Alcohol in Its Relation to Man" the exact data she had been groping for. These lectures seemed to her to prove "the dangerous difference between the demonstrated fact that it is the nature of a little alcohol to create an uncontrollable appetite for more, and the popular idea of the harmlessness of using alcohol in small quantities," and the corollary seemed to her to be "that intemperance could never be prevented until the people were taught to really know the effects of alcoholic drinks, and that this must be done through the schools." From 1880 until the present time this really remarkable woman has given her life with intense devotion and extraordinary success to a national, and even world-wide, propaganda of her faith.

The movement is variously called "scientific temperance instruction," "temperance physiology" or "physiological temperance," and it has now grown to such proportions and has gained such power as to dominate, almost absolutely, all instruction in elementary physiology and hygiene in America. It is of course right and proper that pupils in all grades of the public schools should be taught the dangers of alcoholic beverages as fully and as earnestly as other dangers lurking in food or drink. We may even grant that more stress should be laid upon this subject than upon some others. But an examination of the present status of elementary education in physiology and hygiene in the United States shows that in many cases the instruction demanded by this propaganda, and given according to law, in reference to alcohol goes much further. It even appears that all instruction in physiology and hygiene in the public schools has passed to a great and unjustifiable extent into the virtual control and under the subjection of the the "temperance physiology" propaganda. Mrs. Hunt, as early as 1888, boldly announced: "We are the recruiting officers, and the teachers the drill-masters, for training the coming total-abstinence army that is to banish alcohol from human beverages."

Authoritative sources of information for testing these statements are easily accessible to all. They consist of the statutes of the several states requiring instruction, often of prescribed and peculiar kinds, regarding alcohol; of the text-books on elementary physiology and hygiene actually in the hands of the pupils; of the teachers—many of whom groan in spirit even when they do not dare to complain openly; and last, but not least, of the bonstful "histories" of the propaganda prepared by Mrs. Hunt herself and published, one in 1891 (or earlier) and the other in 1897.[1]

From these latter it appears that largely through her personal efforts statutes now exist in nearly every one of the United States requiring instruction in physiology and hygiene with special reference to the nature and effects of alcoholic drinks; that in some states a penalty clause is attached for non-enforcement; that in some the amount of space to be given in text-books is prescribed, and in the same or in others, the time to be devoted to the subject. In some states it is also required that the subject shall not be treated in an appendix, or in a separate chapter at the end of the book.

In 1897 Mrs. Hunt[2] stated that "a combination of the Illinois law with the penalty [clause] of the New York law would be an ideal statute." It is therefore easy to see at what she aims, for the Illinois law requires that all pupils "below the second year of the high school and above the third year of school work" counting from the lowest primary, "shall be taught and shall study this subject every year, from suitable text-books in the hands of all pupils, for not less than four lessons a week, for ten or more weeks of each year." For students below the high school "such text-books shall give at least one-fifth their space," and for high-school students "not less than twenty pages, to the nature and effects of alcoholic drinks and other narcotics. The pages on this subject in a separate chapter at the end of the book shall not be counted in determining the minimum." The New York law of 1896 is very lengthy and likewise contains an important provision that "this subject must be treated in the text-books in connection with the various divisions of physiology and hygiene, and pages on this subject in a separate chapter at the end of the book shall not be counted in determining the minimum."

The effect of these peculiar laws closely defining instruction in physiology and hygiene has been to create a correspondingly peculiar class of text-books. Some of these have been prepared by competent writers, but most of them are inferior and some are distinctly bad. One chapter in Mrs. Hunt's "History" is entitled "The Text-Book War." It is not agreeable reading, either for scientific men or for educators. In a so-called "Great Petition to Publishers," which reads more like a threat than a petition, it is stated: "This is not a physiological, but a temperance, movement. In all grades below the high school this instruction should contain only physiology enough to make the hygiene of temperance and other laws of health intelligible. Temperance should be the chief and not the subordinate topic, and should occupy at least one-fourth the space in text-books for these grades." In the same "Great Petition to Publishers" we find it also stated that "Those text-books that are largely physiology with a minimum of temperance matter . . . do not meet the requirements of the law, and do not satisfy those who secured its enactment, and *are determined to secure its enforcement*." Further on, publishers are told exactly what is wanted, in great detail and in no uncertain tones.

Text-books conforming with these requirements of the propaganda may be officially "indorsed" by a "Committee of the Advisory Board" sitting in council for the purpose. In another chapter, entitled the "Text-Book War Over," it is stated that "in response to the Great Petition most of the publishers have expressed the desire to have their books revised, on condition that the National Superintendent of the Scientific Department of the Woman's Christian Temperance Union would revise them or supervise their proposed revision." That is to say many publishers were naturally eager to have their books "indorsed" by Mrs. Hunt, doubtless hoping thereby to increase their sale. On August 10, 1888, Mrs. Hunt "with secretaries and helpers returned to Hyde Park, Massachusetts and opened again 'Hope Cottage' which became the local base of operations for text-book revision." "That these revised books might be distinguished at a glance from the unrevised and unworthy books a committee was chosen * * * to indicate upon each its character. * * * The position

1. "A History of the First Decade of the Department of Scientific Instruction in Schools and Colleges of the Woman's Christian Temperance Union." By Mary H. Hunt, Superintendent for the United States and the World's W. C. T. U. Second Edition. Boston, 1891.

2. "An Epoch of the Nineteenth Century. An Outline of the Work for Scientific Temperance Education in the Public Schools of the United States." By Mary H. Hunt, National and International Superintendent of the Department of Scientific Temperance Instruction, and Life Director of the National Educational Association, Boston, 1897.

of the chairman (Mrs. Hunt) of this committee chosen to extend the indorsement to school text-books of this kind in behalf of the signers of the Great Petition to Publishers and of the Woman's Christian Temperance Union has proved a very trying one and a most severe test of loyalty to principle."

I may remark in passing that one is frequently reminded in Mrs. Hunt's 'histories" that the United States Commissioner of Education is, or was, a member of the Advisory Board which has conducted this remarkable propaganda. As to the propriety of the Commissioner's connection with this movement, I make no comment.

It would be tedious, though not uninstructive, to give many more quotations from the extraordinary documents which recount the history of the "scientific" temperance movement. Those who desire to inform themselves more fully should not fail to consult the original authorities referred to above. As an illustration of the almost hysterical scenes accompanying the work of securing favorable legislation by this particular propaganda, I can not forbear quoting the "Report of an Eye-Witness" describing the passage of the Pennsylvania law: "As the work of widening the temperance sentiment goes on we come now and then, would that it were more frequently, to the place where the only thing to do seems to be to raise an Ebenezer, and the only thing to say is 'Hitherto hath the Lord helped us.' * * * Upon a great tide of womanly support that buoyed her up on wave after wave of prayer and of faith in her powers, has the leader of this work (Mrs. Hunt) been borne from city to city like a brave ship, laden with the treasure of knowledge and blessing to be spread out before the listening people. * * *" Then follows a description of the State Capitol, and of the gathering legislators, of their good-natured reception of Mrs. Hunt, of her address and its effect, after which the writer passes on to the opening of a following session: "Almost before the amen of the opening prayer had been uttered, a dozen members were on their feet offering the petitions sent in from their various districts in behalf of the bill for "scientific temperance education"; the dozens swelled to scores, and the scores multiplied all in a moment, until so many boy-messengers were flying down the aisles with the papers, and so many arms were waving in the air, that from every seat there seemed suddenly to have sprung a great fluttering, white blossom of petition. * * * I make no mistake when I call Mrs. Hunt the mother of the bill. * * Behind this mother of the bill stood some of those who have borne it so closely upon their hearts that they may properly be called its godmothers, its sisters, its cousins and its aunts." The bill was passed and signed by the Governor and the writer remarks, "It was a God-given victory and to Him be all the praise."

One of the humors of the passage of a national law requiring "scientific" temperance instruction at West Point, at Annapolis, in the District of Columbia and for all schools under Federal control, was a debate in the Senate in which "A certain senator declared that 'rum-sellers or patrons of rum-sellers have as good right to have their views on temperance education printed by the National Government as any woman. * * * The following extract," says Mrs. Hunt, "from a letter a lady from his own State wrote that senator is a fair illustration of the reception his ideas received among his constituency: 'When I knew you, sir, in our state, you were a chivalric Southern gentleman. Imagine my indignation at the audacity of the reporter who dares to report you as saying that "liquor men have as good a right to be heard in the Congress of the United States on the education of the children as any lady. * * * I am sure you must be misrepresented, for no man who would say such a thing in the National Senate could represent a white man's government from this State.'" "Many such letters," adds Mrs. Hunt, "reached that senator, and thus his opposition died."

No wise educator who has given any attention to the subject can deny that the influence of this powerful propaganda has been in most respects injurious to the proper teaching of physiology and hygiene in the lower schools. Teachers, principals, superintendents, and even school committees, are seldom able to speak with perfect frankness on the subject, from fear of the influences which may be brought to bear against them or of the intemperate criticism to which they may be exposed; and in my opinion it is time for a body of scientific men like the American Society of Naturalists or the American Association for the Advancement of Science to put on record its opinion that the subjection under which science and education are to-day suffering from the "temperance physiology" propaganda has become intolerable. . . .

It is a notorious and a disgraceful fact, that, apparently with a view of pleasing this self-constituted oligarchy, some writers have even made alcoholic instruction the beginning, the middle, and the end, of their text-books. Of such books it may truly be said that they have no permanency of their own, and are only with difficulty preserved by alcohol.

What I have said thus far of this subject applies mainly to elementary education; but those who have witnessed the virulent attacks upon a conscientious chemist and physiologist, who has recently made important physiological experiments upon the oxidation of alcohol within the human body, because his experiments have seemed to confirm the earlier statements that alcohol in minute quantities is more like a food than a poison, do not need to be told that this same propaganda is quite as eager to bring science, as it has already brought education, under its powerful dominion. Signs are not wanting, however, which indicate that its control has already reached its climax, and even begun to decline.

An attempt in 1899 on the part of Mrs. Hunt and others to make the Massachusetts law conform more closely to the ideas of those interested in "scientific temperance" was stoutly resisted by the Massachusetts Medical Society, as well as by various scientific men and educators, with the result that the statute of 1885 remains unchanged. This prescribes that "physiology and hygiene, which in both divisions of the subject shall include special instruction as to the effect of alcoholic drinks, stimulants and narcotics on the human system, shall be taught as a regular branch of study to all pupils in all schools supported wholly or in part by public money, except special schools maintained solely for instruction in particular branches, such as drawing, mechanics, art and like studies." With the exception of the clause "to all pupils" this statute is not unreasonable, for, as I have said above, it is right and proper that the youth of the land should be taught, plainly and thoroughly, the dangers which lurk in alcoholic drinks, in narcotics, etc. What is unnecessary and objectionable is that the exact amount of such teaching should be prescribed by law; and that the method of teaching (by text-books in the hands of the pupils), the space devoted to it, and its treatment, in text-books, should be legally regulated. That, in addition, the particular text-books used should be largely determined by a self-constituted and unofficial oligarchy, leaders of a propaganda, which, in any right use of the terms, is neither educational nor scientific, is both odious and intolerable.

In Connecticut, in 1901, a statute of the objectionable sort referred to above was repealed, and one to which but little exception can be taken was enacted in its place.. It is gratifying to note, also, that the Department of Superintendence of the National Educational Association, at a meeting in Chicago in the early part of the same year, adopted a report containing the following significant, if guarded, paragraphs:

"The questions of highest importance for teachers and superintendents of schools to consider [concerning 'temperance physiology'] are those which relate to the methods by which temperance instruction shall be imparted, the extent to which it shall be carried, and the subject-matter to be presented.

"The educational side of this question is vitally important, and demands thorough and systematic study."

This action is timely and welcome in view of the existence of opinion like the following, expressed in a letter to me by a representative of a prominent publishing house: "I feel that we can not be too emphatic in expressing sympathy with your movement and in denouncing the intimidation of teachers and other educators which has gone on for some years. The whole so-called temperance physiology movement of the

W. C. T. U. seems to have fallen into the hands of blackmailers and schemers, who pull the wool over the eyes of the rank and file of the organization and work both schools and publishers for their own financial benefit. You are quite right in saying that the school teachers are bullied; they are, and they do not dare resent such action as it should be resented."

Time fails me to deal, as I would be glad to do, with other forms of propaganda which seek to bring under their special subjection various departments of science or education. One of these is that known as the anti-vaccination movement, which is widely supported not only in England, but of late also in America, and has already succeeded in both countries in modifying very materially those requirements of compulsory vaccination indicated by science, experience and common sense. It is true that compulsory vaccination should be undertaken only after the most careful consideration, for it constitutes a serious trespass upon the fundamental right of personal and individual liberty. But I have no idea that this movement will ever seriously subvert the cause of vaccination, for the reason that a lively epidemic of smallpox will generally bring the majority of the people to their senses, and such epidemics are tolerably sure to come if anti-vaccinationists become too numerous or too active. I must, however, enter a protest against those medical practitioners who after merely prescribing powders for children give them certificates of vaccination which will enable them to attend the public schools. Such lying and deceit merits only the condemnation and contempt of all lovers of science and truth.

Naturalists should also be on their guard against the influence of that new but rapidly growing sect, known as christian scientists, which virtually denies the existence of disease and accordingly, logically enough, disapproves of all teaching of physiology and hygiene. It has recently come within my own knowledge that a christian scientist refused to attend a lecture on domestic economy by an expert because the latter happened to be at the time attending a meeting of the American Public Health Association, alleging that no one could be worth hearing on the subject appointed who had anything to do with an association devoted to a purpose so useless.

With propagandists besieging more or less successfully our halls of legislation, the time has come when bodies like the American Society of Naturalists and the American Association for the Advancement of Science should have standing committees on legislation to take care, as far as possible, that unwise, extravagant or fanatical ideas regarding science and education shall not be given the force of law by the several States or by the Federal Congress.

If to-day we have little to fear from dogma or theology we may still have much to dread from foolish or needless legislation; and I desire to urge upon all those to whom these words may come, the duty, alike of individual watchfulness and of united effort, to resist everywhere and always the statutory subjection of science and education to propaganda.

Clinical Report.

ACUTE MORPHIN POISONING IN AN INFANT —RECOVERY.*

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CENTERVILLE, OHIO.

At 3 a. m., July 6, 1899, I delivered Mrs. W. of a well-formed and developed female child, weighing 8 pounds, after a normal labor in every respect. Recovery was slow and tedious, due to her highly neurotic temperament.

On the tenth day after labor, the patient suffered considerably from facial neuralgia, due to some carious teeth. This neuralgic trouble resisted ordinary treatment, so one-eighth grain of sulphate of morphin powders was given, with the instructions to the nurse, that a powder should be given every four hours until relief was experienced. This was done. About this time, the tenth day after the accouchement, the child developed considerable intestinal colic as the result of flatulency, and a diarrhea set in. My attention was called to this and I gave ½-grain Dover powder, ½-grain bismuth subnitrate and ½-grain soda bicarbonate, to be repeated every three hours till child was easier and diarrhea was somewhat controlled. This was successfully accomplished in a couple of days. From the end of the second week the mother's convalescence was more rapid and finally she was out of bed at the end of three weeks.

The child did well and increased in weight till the twenty-seventh day was reached, when the diarrhea set in again. The father called at my office on the evening of that day and asked if those diarrhea powders would answer which I had given some two weeks previous. He was told they would and was given instructions to give one every three hours till relief. At 11:30 p. m., August 2, I was hurriedly called to the bedside of the little patient by a messenger, stating that the child was dying. Upon arrival, the child was found to be suffering from poisoning from some cause. Inquiry elicited the fact that one of the ½-grain morphin powders had been given the babe instead of the intestinal powders. The little patient was found in a comatose and narcotized state with considerable cyanosis. Pulse was 20, very irregular and weak. Respirations were 4 per minute and stertorous. Pupils were the size of a pin-point.

I gave at once 1/150 gr. strychnin sulphate and 1/300 gr. atropin sulphate hypodermically. Hot and cold affusions, alternating, were given by nurse, while the stomach was being washed out, first with strong infusion of black coffee, and finally with clear warm salt solution. High colonic lavage was practiced with the hot normal salt solution. The hot and cold affusions were soon changed to hot and cold baths, to keep up the respirations. As soon as these were stopped the child almost ceased breathing. At the end of one hour, the child was breathing somewhat more regularly. Pulse was 30, full and more regular. The above hypodermic was repeated, and hot and cold baths continued alternately. The action of the hot water was very stimulating to the heart, but if held in this bath too long the respirations became slower and almost ceased, when the cyanotic state developed again. At the appearance of the cyanosis the cold bath was substituted, and breathing again became more regular. This treatment was continuously kept up for five hours, when every half-hour a hot and cold bath was given for two hours. At the end of the seventh hour the respirations were 30 per minute, but not very regular. Pulse was 120, regular but weak. Pupils were moderately dilated. The child was yet sleeping profoundly and would not utter a sound, nor could be aroused. I gave 1/300 grain strychnin sulphate and 1/450 grain atropin sulphate, and in one hour pulse became stronger and respirations became more regular, about 40 per minute.

Here the little patient was placed in charge of the nurse with instructions to give another hot and cold bath should the child show any signs of dyspnea or the cyanosis appear again.

In about four hours the little patient was again seen and found to be sleeping; respirations 40, full and regular. Pulse was 140 and fairly good. At this time the child's temperature in the axilla was 99 F. No urination had occurred, nor had the bowels moved. The colon was again washed and some feces passed. The following was now given: tinctura belladonnæ fol. gtt. ii, and tinctura nucis vomicæ gtt. ii, every two hours till further instructed, with instructions in regard to the application of external heat. In about six hours the child was seen again, at 9 p. m., August 3, twenty-two hours after the ingestion of the morphin, and found to be resting comfortably. Respirations were 40; pulse was 120, full and regular. The child urinated at 8 p. m., a very small quantity. An attempt was now made to have it nurse the breast; the effort was successful. The convalescence was rapid and uninterrupted, and in four days the child was enjoying normal health.

No convulsions were seen in this case, as H. C. Wood, quoting Althaus, says: "In infants, however, and also in the lower races of mankind, as in negroes and Malays, convulsions are observed after its (opium) ingestion." No other effects or sequelæ were noted.

Some few years past the use of a solution of permanganate of potash was very frequently employed as a chemical antidote

* Read before the Montgomery County, Ohio, Medical Society, April 5, 1901.

to morphin or opium. Some very unfavorable results occurred and to-day it is not so often used. Hence we must finally content ourselves in combating the narcosis of poisoning by morphin or opium by aiding the respirations and sustaining the circulation and eliminating the poisonous products from the system.

The Organization of the Medical Profession.

(Continued from page 400.)

VI.

THE REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association was organized fifty-five years ago, when there were about 20,000,000 inhabitants and possibly 25,000 physicians in this country. As organized the Association was a representative body, and its legislative and business affairs were controlled by delegates from affiliated societies,[1] such societies being entitled to one representative for every ten members. At that time this apportionment made a delegate body that was representative of the then existing societies, as well as of the settled parts of our country, and at the same time it was not larger than was necessary to transact business.

The rapid increase in population and the settling of vast territories were, of course, accompanied by a rapid increase in the number of physicians and also of medical societies. Naturally, the National Association grew in membership and its annual sessions gradually became larger and larger. In spite of this, however, no change in the apportionment of delegates was made during all these years, and until the last meeting of the Association every affiliated state, district and local society was still entitled to send one delegate for every ten members or fraction thereof. There finally developed such a condition of affairs that practically every member of the American Medical Association who desired to attend its annual sessions as a delegate could do so. This is to say, the numerous societies, and the low apportionment made it possible for all to be delegates who desired. Further, while the annual sessions through the increase in attendance and the excellent work of the sections were becoming more and more valuable from a scientific and educational point of view, the important legislative functions pertaining to a great body representing the interests of the medical profession of the country were neglected.

In the early history of the Association's existence, state societies were more in direct touch with it, since the delegates from these made up the greater portion of the delegate body. As time went on and other societies were organized, the representatives from and the influence of the state societies in the American Medical Association became proportionately less and less each year, in some instances a local society in a state being entitled to send more delegates than the state society itself. The natural result of these conditions has been that, in many instances, the original close relationship existing between the state and national association had become almost extinct, so much so that to many of the state societies the American Medical Association was no more than any other large medical society. We refer those of our readers who desire a fuller understanding of the conditions prior to the reorganization last June to the full report of the Committee.

At the Atlantic City meeting, June, 1900, a Committee was appointed with instructions to consider and recommend a plan of reorganization. This Committee brought in a report at St. Paul, June, 1901,[2] which included a revised constitution to accord with the changes recommended by the Committee. The report and constitution were adopted. By this action two changes were made in the organic law of the American Medical Association.

The first of these provides for a reapportionment of delegates. As mentioned above, each affiliated society—state, district, county and local—was entitled to one delegate for each ten or major fraction of ten of its members. Under the new constitution the state societies alone will be represented, the lower societies being indirectly represented through their state organization. Each affiliated state and territorial society will be entitled to one delegate for each 500 or fraction thereof of its active members. All affiliated state and territorial societies, however, will be entitled to at least one representative, no matter how small the membership.

The second change gives the legislative body a distinctive name—the House of Delegates of the American Medical Association. While in one respect this might be called a new body, it is not strictly so. It is the old delegate body, but smaller, more representative and with a definite title. The old delegate body was unlimited as to number; in quite recent years the delegates numbered about 1500 last year over 1700 having registered. According to the new constitution the number of delegates is limited to 150. When it exceeds this number a new apportionment is to be made. Besides the representatives from the affiliated state and territorial societies, each of the twelve sections will have two representatives and the medical department of the Army, the Navy and of the Marine-Hospital Service one each. Hereafter, therefore, the legislative or business body of the American Medical Association will be created by the state and territorial societies, with the exception of the 27 from the sections and the Government Services. It will be a body in which the state societies will federate themselves, be national in character and will not be influenced by the locality in which the Association may happen to meet.

This evolution of the American Medical Association is the first step in a movement for a systematic organization of the profession of our country on a definite and distinctive plan. The beginning of the great movement had to be made at the top. But the American Medical Association has gone as far as it can and now calls on the state and territorial societies to do their part; successful organization now depends on the mutual co-operation of the state organizations with the American Medical Association.

WHAT THE AMERICAN MEDICAL ASSOCIATION ASKS OF THE STATE SOCIETIES.

The following resolutions, among others, recommended by the Committee on Reorganization were

1. At first certain colleges and hospitals were allowed to send delegates.

2. See JOURNAL A. M. A., May 25, 1901, p. 1435.

adopted at the last meeting of the American Medical Association:

c. That the state societies unitedly agree to federate themselves in the American Medical Association, and as a preliminary to this adopt a uniform organic law in regard to certain fundamental principles: viz., to divide their annual sessions into two branches, legislative and scientific; the legislative branch to be as small as is compatible with representation from all the county societies, and to be composed of delegates elected by the county societies.

d. That membership in the county or district societies shall constitute membership in the respective state society without further dues, and that no one be admitted to membership in the state society except through county or regular district societies.

e. That funds to meet the expenses of the state society be raised by a *per capita* assessment on the county and district societies.

f. That a united effort be made to influence special societies to limit their membership to those who support the regular organization, and the semi-national and miscellaneous societies to encourage systematic organization, by covering a definite territory and also by limiting their membership to supporters of the regular organization.

g. That each state society create a permanent committee and a fund for the purpose of enforcing all medical laws in every part of its territory.

h. That each state society co-operate with the American Medical Association and with the other state societies in solving the problems now before the profession relating to medical education, medical legislation, reciprocity, licensing, etc.

An analysis of these resolutions shows that the American Medical Association requests the following:

1. The federation of all the state associations in the American Medical Association.

2. That all associations adopt a uniform plan of organization as regards certain fundamental principles.

3. That each state association have two distinct branches, legislative and scientific.

4. That the legislative branch be as small as compatible with representation from all county societies in the state or territory, and to be composed of delegates elected by the county (or district) societies.

5. That the scientific branch be composed of and open to all members of county (or district) societies, or as stated in the resolution: "Membership in the county or district society shall constitute membership in the respective state societies without further dues, and that no one be admitted to membership in the state society except through county or regular district societies."

Federation of the State Societies in the American Medical Association.

In asking the various state societies to federate or unite in the American Medical Association, the latter is practically saying to them: "All of you join together, through representatives, and, thus united, be the American Medical Association. Each of you come, stating your needs and your views on the problems that affect the health of the people and the welfare of the profession. With your combined wisdom, consider what can be done to eradicate the evils from which the profession is suffering, both from within and from without, and how the science and art of medicine can be better applied in the interest of the health of the people."

In the future, by this federation, the legislative body of the American Medical Association will be what the state societies make it; and those who compose it will be the mouthpiece of those they represent, to give expression to their views and their desires. There is no doubt but that when the new conditions, with all their possibilities, are appreciated, the important questions brought before the House of Delegates will have been previously considered and acted on by the legislative bodies of the state societies, and the representatives of such bodies will therefore bear a definite message on such important subjects to the national gathering. Thus will be developed and encouraged in the annual sessions of the state bodies a lively interest in affairs of national importance which relate to the health of the people and the welfare of the profession.

That there are many problems to be considered, evils to be eradicated, and conditions to be changed which can only be dealt with by the co-operation of all the state societies, has long been recognized. Uniformity in medical legislation, control and regulation of examinations for license to practice, interstate regulation of epidemics, etc., will be possible through combined action of organized state societies. One of the greatest evils afflicting our profession to-day, as it has been for years, is the large number of medical colleges of inferior grade. The evil is not due alone to the annual out-pouring of thousands of illy prepared men, with a lesser proportion, it may be, of those well-fitted for their work, but to the commercialism, the strife, the petty ambitions, jealousies and general demoralization which go with these, including free dispensaries, free clinics, and free hospitals. These, as well as the majority of the evils of which we complain, are brought on by ourselves, and can be corrected by our own efforts. But individual state organizations acting alone, no matter how strong they may be, can do but little. Well organized state societies combined together can purge the profession of most of the evils which originate in the profession. In the past there has been no possibility for co-operative work for general good among the state societies, and none has been attempted. In the future the state societies, through elected representatives, will be brought together in the House of Delegates for such coöperation. We may, therefore, look forward with hope for better things.

In brief, this federation is necessary as a bond of union between the state societies, to develop and cultivate the community of feeling that should exist in the profession throughout the country, to secure unity of action on national questions where the public health or the interests of the medical profession are involved, and to generally promote the scientific and material progress of American medicine. It is unnecessary to go into further details as regards this feature, the utility of which we take to be self-evident.

(To be continued.)

Successful Laminectomy.—G. Baarnhielm treated a case of spondylitis dorsalis and spinal paraplegia more than five months ago by laminectomy and the application of a plaster corset for a time. The patient was a tailor, 26 years old, who had previously had one testicle removed on account of local tuberculosis. The day after the evacuation of the abscess and caseous masses and extensive laminectomy, the patient was able to move both legs freely and made a rapid recovery. He is unable to work at his trade owing to slight kyphosis, but feels well and strong in another occupation and walks without support. The spondylitic paraplegia had existed for six months at the time of the intervention and the spondylitic process was at its height. The paraplegia was not quite total although spastic symptoms were very pronounced. No preliminary extension was attempted. Suspension and pressure on the hump aggravated the condition and instead of waiting for the tubercular process to reach the stage usually considered best for such intervention, Baarnhielm operated at once. It is the only case to his knowledge in which the paraplegia disappeared immediately after the intervention. Drainage was limited and brief.—*Nordiskt. Med. Arkiv.*, xxxiv, i, 3.

produced tuberculosis at that point. Straus and Wurz found that prolonged action of artificial gastric juice upon avian tubercle bacilli attenuated them somewhat, sometimes killing them, but stated, however, that the conditions of the experiment were more severe than those presented during life. Nevertheless, despite the qualifications made by Straus and Wurz, their work has been widely quoted, according to Carrière,[1] as showing that gastric juice kills the bacillus of tuberculosis.

On account of the unnatural conditions under which these experiments were performed, Carrière thought to repeat them in a way more nearly duplicating natural conditions. One series was performed with gastric juice obtained from the stomach of a healthy man. Tubercle bacilli, in sputum, milk and pure culture, were exposed at body temperature to the action of this juice from two to twenty-four hours. It was found that twelve hours exposure, more than they would suffer in the human stomach in the natural course of events, had no effect upon their virulence. Another series of experiments, even more nearly reproducing natural processes, consisted in introducing the tuberculous materials into the stomachs of healthy guinea-pigs and rabbits, and after it had remained there for variable lengths of time it was removed and injected into other animals, which it infected invariably. Evidently, then, gastric juice does not offer much safeguard to infection from tuberculous food. Agreeing with its general behavior to injurious influences the bacillus of Koch resists hydrochloric acid more than most other organisms. For example, Schultzenstein[2] finds that the cholera spirillum is killed in fifteen minutes by a solution of .03 per cent. hydrochloric acid. Although gastric juice does not destroy tubercle bacilli quickly, still it apparently is able to prevent their multiplication, for a tuberculous ulcer in the stomach is one of the greatest rarities. Simmonds[3] found that they existed but eight times in the bodies of two thousand tuberculous subjects, and even then seemed dependent upon digestive disorders.

The experimental observations above referred to have been made on human and avian bacilli. Because of the bearing on food infection it would be interesting to learn if bovine bacilli are equally resistant to human gastric juice.

1. Compt. Rendus, Soc. Biol., 1901, liii, 1098.
2. Cent. f. Bakt., 1901, xxx, 785.
3. Münch. Med. Woch., 1900, xlii, 317.

THE ONE THING NEEDED BY THE HOMEOPATHIC SCHOOL OF MEDICINE.

In the Jubilee Number of the *North American Journal of Homeopathy* (1, 1902, 54), Dr. Millsop gives a gloomy view of the present state of homeopathic therapeutics. A bright picture is first exhibited, depicting the satisfactory side of the situation. The author says: "We have surgeons galore of the best quality; fine college buildings equipped with every modern appliance and competent instructors, numerous hospitals, dispensaries, etc., with a larger percentage of cures than recorded by any other school of medicine. In diagnosis we call to our aid all known scientific methods." After this array of the possessions of the "school," there follows a very pathetic narration of the one thing which it does not have, and which has always been supposed to be the one thing that distinguished the homeopathic from other "schools" of medicine and from scientific medicine. "There is one thing needful to render us the successful practitioners we could and should be. This one essential is a more thorough knowledge of our materia medica, and a more intelligent application of our remedies in practice. This need has been impressed upon me more especially during the past seven months, while upon an extended trip through the South and West. Everywhere the complaint was made by physicians and successful surgeons of our school that there are so few good prescribers and that many of our doctors are resorting to every other means of cure rather than to the prescribing of their own remedies. So general has this state of things become that the sad conclusion has been well-nigh forced upon me that homeopathic remedies are going out of fashion."

If the remarkable success of homeopathic institutions related by the author is due to the therapeutic skill of doctors who are resorting to every other means of cure rather than to the prescribing of their own remedies, it is poor logic which credits homeopathic treatment with the results. It does not appear to have occurred to the writer that the well-equipped colleges with competent instructors in other departments than therapeutics may have been a factor in inducing men, who thus obtain some scientific training, to adopt any means of cure which reasonably promises to be of benefit to the sick, even though it may not consist in the administration of infinitesimal doses. It is a favorable sign to find a faithful disciple of Hahnemann who acknowledges the natural tendency of which most medical men are aware, and it causes us to renew our hope that the time is not so very distant when the believers in the efficacy of dilutions will cease to shut themselves up in a "school" and will become a part of the regular medical profession, the members of which are ready and anxious to employ any and every means which can be scientifically shown to have a favorable influence upon the course of disease.

FARM COLONIES AND TENT LIFE FOR THE TUBERCULOUS.

A great deal has recently been said and written about sanatoria for tuberculous persons, and regarding the value of open air and light in the treatment of such patients. Freudenthal[1] advocates what appear to be practical means, by which many tuberculous patients might be placed in very favorable conditions upon "farming colonies." The colony would be established upon a large farm, which has a favorable location as to climate. The buildings could be inexpensive, and a large part of the year could be spent in tents, which mode of life is

1. New York Medical Journal, lxxv, 1902, p. 146.

beneficial in itself. Norman Bridge[2] called attention in our pages to the fact that most of the climatic benefit that comes to this pathetic class of patients is due to their ability to live practically out of doors a large part of the time, night and day. The patients could help to place such an institution upon an economic basis by doing such light work as they were able to perform, and this would be beneficial to them, both physically and mentally. Such a plan if carried out would place tuberculous patients with small means in a position to obtain the advantages of climate and out of door life which at present can only be gotten with considerable expense, and in many cases is absolutely out of the question. By a certain amount of State aid, persons unable to pay could be provided for upon such a plan at no greater cost than is now required to care for them in poorly located, unsuitable, and often crowded hospitals.

A SELF-SACRIFICING PHYSICIAN.

What is the matter with Brooklyn? Within a few weeks one local practitioner of that borough has come into prominence by his alleged experiment of inoculation of a woman with tuberculosis, and now another proposes to go him one better by submitting his own body for a year to vivisection. Of course, it is for the highest kind of scientific considerations that these heroic men sacrifice others and themselves; all the world knows that, and if any doubt existed as to this point it would be dispelled by their own persistent and strenuous efforts to inform the public through the press as to the scientific purity of their motive. They are always "leading physicians"—the newspapers say so, possibly on the highest authority, that of the parties themselves. With such evidence available the unconsequential fact that we have never heard of them before goes for nothing, and we can appreciate the pain they feel from the newspaper notoriety they obtain and the ignorant and unfeeling comments their projects receive. It is said that in this latest case the wife's urgent entreaties have called the doctor off from his proposed self-sacrifice, thus showing a limit to his scientific enthusiasm. He evidently does not go so far as Artemas Ward; there is one of his wife's relations—by marriage—that he is willing to spare. A daily paper rather unkindly suggests that the heroism exhibited by the volunteer for vivisection hardly matches that of the vivisectors, should he discover them, who might have to undergo equally or still more unpleasant operations at the unskilled hands of unscientific officers of the law. It is to be suspected that this kind of heroism will be found lacking. It would require a degree of immoral courage that is rarely at command in the medical profession.

A WISE CORONER'S JURY AND EDDYISM.

In Michigan recently, a Wayne County coroner's jury returned the following verdict in the case of a believer in Eddyism who died without medical attendance:

We find the deceased came to his death as a result of a complication of diseases, mostly acute in form and character, and that his end was untimely and most miserable, owing to his being denied the medical supervision and treatment which by the common consensus of the best opinions of the most enlightened of mankind and the accumulated experience of all time has demonstrated to be necessary and imperative in the proper prevention of disease and death, and the humane amelioration of human suffering. We find inhuman treatment accorded said deceased was by a so-called sect of "christian scientists" in disregard of all basic and physiological laws.

We have more than once had occasion to criticise the decisions of coroner's juries and it is therefore a positive pleasure to quote one that deserves only commendation as in this case. There were, it is said, some peculiar features in this case: among them an internal abscess, of course undiagnosed, but the physicians who made the postmortem saw nothing that would have prevented recovery under proper medical or surgical treatment. "Absent" treatment by an Eddyite practitioner was sought for but was claimed to have been ineffective because he could not read correctly the name as sent to him, thus showing one of the limitations of Eddyism; the little god of the Eddyites can do nothing with bad writing. As the *Detroit Free Press* says in editorially noticing the case, from one point of view the subject is too ridiculous to be seriously discussed. In another, however, it shows a serious condition of affairs; owing to the laxity of our law-makers and law-administrators and the general public delusional apathy this kind of manslaughter, to use no harsher term, can be committed with impunity and only rarely does it receive such a wholesome condemnation by any legal authority. The Michigan jury, however, did its duty and we are glad to have the opportunity to notice the fact.

DIABETES FROM INJECTION OF ADRENALIN.

The suprarenal gland has long been an organ full of mystery. The preparation of the active substance or substances of this gland known as adrenalin (Takamine) is endowed with powerful properties. Recently Herter and Richards[1] showed that the injections into the abdominal cavity of dogs of adrenalin solution, 1 in 1000, in doses of from 6 to 10 c.c., in each instance produces well-marked glycosuria. In one instance the sugar appeared in the urine in less than five minutes after the injection. Blum, Luelzer and Croftan all found that the suprarenal gland had some influence upon carbohydrate metabolism. Croftan[2] concluded that the glycosuria observed by him depended upon a ferment in the suprarenal gland which changes the glycogen of the liver into sugar. But Herter and Richards show that boiling the adrenalin solution for five minutes, which would be expected to destroy any diastatic ferment, does not suspend glycosuria after experimental injection. Furthermore, glycogen and adrenalin added together and kept in the incubator do not result in the production of sugar. Hence these authors do not refer adrenalin glycosuria to a diastatic ferment. In some of their experiments they found marked changes in the intestines and pancreas. In two dogs that died after the injection of 6 c.c. of adrenalin (1 in 1000) the cells of the islands of Langerhans of the pancreas were granular and degenerated, the nuclei refusing to stain; and in some parts of the pancreas the islands of Langerhans were more

2. JOURNAL A. M. A., Feb. 1, 1902, 280.

1. Medical News, Feb. 1, 1902, 201-203; see also abstract in this issue, p. 478.

2. American Medicine, Jan. 18, 1902; see also THE JOURNAL A. M. A., editorial comment, p. 402, Feb. 8, 1902.

injured than the adjacent cells of the pancreatic acini. They mention an experiment in which 1 c.c. of adrenalin solution (1 in 1000) plus 1 c.c. of water applied to the surface of the pancreas gave rise to an immediate blanching followed by congestion, and within ten minutes by the appearance of sugar in the urine. These interesting experiments naturally awaken the disposition to further inquiry. Coming so closely upon the demonstration by Opie, Herzog and others, that in diabetes the islands of Langerhans may be the seat of profound changes, the results of these experiments can not but strengthen the notion that some cases at least of diabetes are dependent upon lesions in these bodies, but the exact and no doubt very complicated mechanism whereby the resulting diabetes is produced still remains to be worked out.

Medical News.

CALIFORNIA.

Smallpox is reported at Arbuckle, where there are five cases and at Sierra City where two cases exist.

Mare Island Quarantined.—The naval hospital at Mare Island is in quarantine, on account of smallpox.

Illegal Practice.—Robert Macbeth, San Francisco, charged with practicing medicine without a certificate, was convicted January 30.——N. C. Heron, a patent medicine manufacturer who signed a death certificate, was arraigned at Los Angeles, fined $150 for practicing without a certificate and paid his fine.

Status of Local Health Boards.—The Supreme Court has decided that the municipal board is a legally constituted body and has jurisdiction over the local health of the city and county, and it also intimates that the state board has other powers, partly independent and partly paramount to those of the local board.

Hospital for Indigent Consumptives.—Plans are being prepared for the first of the series of one-story buildings at Los Angeles designed for the care of indigent consumptives. Each building will contain six wards, bath room, dispensary and nurses' rooms. An administration building is to be erected at the same time, and additional hospital buildings as required.

DISTRICT OF COLUMBIA.

Scarlet fever of mild type is prevalent in Tacoma Park, where 14 cases have been reported.

Antivivisection Bill.—Mr. Gallinger has introduced in Congress the old bill "to prevent cruelty to animals"; it is now labeled "S. 3068."

Hospital Board Election.—At the annual meeting of the medical board of Providence Hospital, Dr. John W. Bayne was elected president, Dr. Zachariah T. Sowers, vice-president, and Dr. Thomas F. Mallan, secretary.

Personal.—Dr. J. Ramsay Nevitt, Washington, who has been ill with appendicitis, is improving.——Dr. Presley M. Rixey has been appointed a member of the board of directors of the Columbia Hospital for Women, vice Dr. Louis W. Ritchie, deceased.

GEORGIA.

Medical Legislation in Georgia.—Bills are being prepared under the direction of physicians for introduction into the Georgia Legislature, covering the following points: All coroners are to be practicing physicians; all proprietary medicines brought into the state must be labeled so that the public can know the ingredients and the proportion of each ingredient; no poisonous drug or narcotic, such as morphin, etc., shall be sold without a physician's prescription.—*Southern Med. Journal.*

ILLINOIS.

Pontiac Hospital.—The citizens of Pontiac have subscribed $10,000 toward the erection of a hospital in that city.

Smallpox.—Woodhull, Henry County, is experiencing the usual sequelæ of diseases diagnosed as chicken-pox, Cuban itch, pustular grip and Porto Rican pox, and now has about 75 cases of smallpox.

Evanston's Health.—The report of the health officer for 1901 shows a death-rate of only 8.65 per 1000, the lowest mortality since 1896. Tuberculosis heads the list of death-causes, with heart disease next and pneumonia third.

Rockford Hospital Enriched.—Alexander D. Forbes has presented $15,000 to the City Hospital, to be used in the erection and furnishing of a new ward for young women and children. He does this in memory of his daughter, Jessie Elizabeth Forbes, by whose name the new department will be designated.——The Rockford Chapter of the Daughters of the American Revolution has given $1000, a prize received from an eastern magazine, to the hospital.

Chicago.

Dr. Alice M. Stevees has resigned her position in the oral surgery clinic of the Woman's Medical College and will remove to Boston.

County Hospital Staff.—At the annual meeting of the regular staff of Cook County Hospital, February 6, Dr. Arthur R. Edwards was elected president and Dr. L. Blake Baldwin, secretary.

Dr. E. C. Dudley, in compliance with the wishes of the trustees of Northwestern University and of the faculty of Northwestern University Medical School, has withdrawn his resignation and has resumed his duties at the school.

Influenza Epidemic.—There is noted a general increase in the prevalence of all the contagious diseases—influenza, diphtheria, scarlet fever, whooping cough, etc. Influenza prevails as an actual epidemic and the Health Department predicts that the mortality from pneumonia, Bright's disease and heart diseases will be most unfavorably affected as a consequence.

New Amphitheater Dedicated.—The new amphitheater built in Mercy Hospital at the expense of the Northwestern University Medical School (Chicago Medical College), at a cost of $25,000, bringing into closer relations the affiliation between Mercy Hospital and the medical school, was opened with appropriate exercises, February 12. Dr. John B. Deaver, Philadelphia, delivered the address. He gave a surgical clinic in the amphitheater on the morning of the same day.

The City's Mortality.—The 530 deaths from all causes recorded during the week made an increase of 2.5 per cent. in the mortality rate over the rate of the previous week and of 10.3 per cent. over the rate of the corresponding week of 1901 in proportion to population. The respective annual death rates per 1000 were 15.18, 14.80 and 13.76. Among the principal causes of death pneumonia, diphtheria and scarlet fever show the greatest increase.

Chicago's Immunity from Smallpox.—The wonderful immunity of Chicago from the disease continues. During the week twenty-eight "suspect" cases were examined by the medical inspectors, but only four were found to be genuine cases. Of these, three came by rail—one from Mexico, one from Elkhorn, Wis., one from Calvary, Wis., and one by boat from Milwaukee. None had even been vaccinated. No Chicago case developed during the week and at midnight, February 8, there were 18 cases in the isolation hospital.

INDIANA.

Methodist Hospital.—Indiana Methodists have undertaken to raise $200,000 for the erection, and $500,000 for the endowment, of a hospital at Indianapolis.

Hospital for Huntington.—The business men and railway employes of Huntington have subscribed $2000 toward a public hospital for the city. A site has already been secured.

Union Hospital, Crawfordsville.—Mrs. Culver, St. Louis, who originally donated $10,000 to the hospital, has given an additional $3000, to be devoted to interior finishing and furnishing.

Losses by Fire.—Dr. Frank S. Kitson, North Manchester, sustained a loss of $2000 by the burning of his home, January 29.——The house of Dr. Zeri H. Fodrea, Westfield, was burned, January 28, with a loss of $2000.

Crown Point Sanatorium.—The new sanatorium was opened, January 15. It is a four-story brick building, with modern fittings and equipment, and has a competent medical staff consisting of Drs. William B. Blackstone, George D. Brannon, Henry Pettibone and Joseph Von Osinski, of Crown Point, with Drs. Emil Ries and D'Orsay Hecht, Chicago, as consultants.

IOWA.

Hospital Burned.—The hospital conducted by the Sisters of Charity at Anamosa, was almost ruined by fire, January 30. All the patients were removed uninjured.

To Replace Medical Building.—The chairman of the appropriation committee has recomended an appropriation of $250,000 to replace the medical building which was recently burned.

Hospital for McGregor.—Dr. Henry H. Clark, McGregor, is building a hospital, to cost $18,000, which will be ready for occupancy early in April. It contains 35 rooms and will be fully equipped.

Quarantine Breaker Fined.—Dr. Samuel C. Kirby, the Grand Junction physician who was charged with breaking smallpox quarantine last summer, was recently fined $250 and costs which will aggregate $400.

Smallpox.—The State Board of Health on February 8, adopted the following preamble and resolution:

WHEREAS, Cases of smallpox exist in nearly every county in this state; and,

WHEREAS, Smallpox has occurred in the family or person of some of the postmasters of the state; therefore,

Resolved, By the State Board of Health of the state of Iowa, that the postmaster-general be requested to require so far as possible all postmasters in Iowa and their employes, including city and rural carriers with their families, to be vaccinated, and to furnish to the local boards of their respective localities satisfactory evidence of successful vaccination.

MARYLAND.

Malignant erysipelas is said to be prevailing among the negroes of Marlboro, Prince George County.

Baltimore Mortality.—The deaths for the week ending February 8 were only 187, against 271 for the same week in 1901. The chief cause of death was pneumonia, 27 cases.

Vaccination of Baltimore-Bound Crews.—Surgeon-General Wyman, of the Marine-Hospital Service, has acceded to the request of the Health Commissioners of Baltimore, and has telegraphed to Liverpool that the crews of all vessels sailing for this port must be vaccinated. He says that any ship will now be held up whose crew can not show that they have been vaccinated.

Personal.—Dr. J. Williams Lord, secretary of the Medical and Chirurgical Faculty of Maryland, has sailed for Cuba.——Dr. Henry W. McComas has purchased a residence on Main street in Oakland, and will establish there a sanatorium.——Dr. Henry Cozens, Hagerstown, was appointed dairy inspector of Washington County.——Dr. T. W. Simmons, Hagerstown, was acquitted, February 1, of the charge of violating the health laws by failing to report an alleged case of diphtheria last summer. The warrant was sworn out by the county and state health officers.

MICHIGAN.

The Detroit Polyclinic held its annual meeting, January 27. The report shows that 2700 patients were treated during the year. The following officers were elected: Dr. James E. Davis, president; Dr. Louis J. Goux, vice-president; Dr. S. G. McDonald, secretary, and Dr. F. E. Sanderson, treasurer.

Disease in Michigan.—Reports to the State Board of Health indicate that bronchitis, influenza, rheumatism, neuralgia and tonsillitis, in the order named, caused the most sickness during the week ended February 1. Cerebrospinal meningitis was reported present at 4 places; whooping cough, 27; diphtheria, 27; typhoid fever, 48; measles, 60; scarlet fever, 117; smallpox, 139; and consumption at 215.

Smallpox.—Norway is said to have more than 100 cases, and public assemblages are prohibited until the epidemic is over.——A train was recently held at Grayling for three hours while all the passengers were vaccinated on account of a case of smallpox having been discovered on board.——In Wyandotte and Ecorse township, the schools have been closed, as 32 cases of the disease exist.——The asylum at Traverse City has 6 cases in mild form.

Michigan's Deaths.—The number of deaths from all causes in Michigan during 1901 was 33,848, as compared with 33,320 during 1900. The annual death-rate was 14 per 1000. The deaths of children up to 4 years of age showed a decrease as compared with the previous year. On the other hand, the proportion of deaths of persons aged 65 years and over rose from 8754, or 27.5 per cent., to 9524, or 29.5 per cent. Pneumonia, both in 1900 and in 1901, was the most fatal disease. There were 2799 deaths reported directly or indirectly from this cause in 1900 and 2993 in 1901.

How Long!—A Dowagiac paper, at this late date, thus notices the advent of a strange disease: "The doctors are badly puzzled over a disease which has manifested itself here, and no two of them seem to agree as to what to name it. It has been raging here six or eight weeks. Smallpox, Cuban itch, Dakota itch and la grippe are the various names that have been attached to it. The disease, whatever it is, is not a violent one, and leaves the person afflicted within a few days, and sometimes even without the care of a physician. No one appeared to be much frightened over it until last Sunday the health officer closed two of the public schools and quarantined and placarded several homes 'smallpox.'"

NEW HAMPSHIRE.

Personal.—Dr. Orlando B. Douglas has moved from Suncook to Concord.——Dr. James Black has located in Nashua.——Dr. Irving A. Watson, Concord, secretary of the State Board of Health, fell and broke his leg.

Hospital Bequests.—By the will of Mrs. Emeline R. Balch, Manchester, Elliot Hospital receives $3000, and after the payment of bequests the balance is to be devoted to the establishment and maintenance of a hospital in Manchester to be known as the Balch Hospital.

Elliot Hospital, Manchester.—At the annual meeting, January 14, the following medical staff was appointed: Attending physicians and surgeons, Drs. George D. Towne, J. Franklin Robinson, L. Melville French, William H. Pattee, A. Gale Straw, Daniel S. Adams, Charles F. Flanders, and John H. Gleason; aural and ophthalmic physicians, Drs. Henry DeW. Carvelle and Emdon Fritz; assistant surgeons and physicians, Drs. Irving L. Carpenter, George M. Watson, Thomas C. Hill and F. C. Stewart.

NEW YORK.

Incipient Tuberculosis Hospital.—The senate has passed Senator Davis' bill, appropriating $50,000 for a state hospital for treatment of incipient tuberculosis.

Hospital Endowed.—It has just become known that, a short time prior to the death of William F. Cochran, Yonkers, he established a fund of $150,000 for the endowment of St. John's Riverside Hospital at that place.

Marine-Hospital for Buffalo.—A bill appropriating $125,000 for a marine-hospital to be erected at this port has been favorably acted upon by the committee on interstate and foreign commerce of the House of Representatives.

The Rodgers bill, embodying Governor Odell's views for the control of the state charitable institutions, and abolishing local boards of managers for state hospitals for the insane, finally passed the senate by a vote of 31 to 18. It was vigorously opposed, and by many who are in a position to judge, this is said to be a distinct step backward.

Emergency Hospital for Bronx Borough.—Senate bill No. 250, introduced by Mr. Hennessy, authorizes the Sinking Fund Commissioners to acquire land for the erection thereon of a reception hospital for persons injured or taken ill suddenly in the Borough of the Bronx. Entire cost of land shall not exceed $200,000, and the cost of the building and equipment and furnishing shall not exceed $300,000.

Evolution of Consolidation.—The council of the New York State Medical Association has acted promptly on the resolution of the Medical Society of the State of New York and has appointed a committee to confer with a like committee from the Society, with a view to a union. The committee appointed by the New York State Medical Association consists of Drs. E. Eliot Harris, Parker Syms, Emil Mayer, W. H. Biggam, and Frederick Holme Wiggin.

New York Deaths.—In addition to the 129,257 deaths for the year reported in the monthly bulletin of the State Board of Health, there were 1500 delayed returns, making the annual death rate 18 per 1000. The mortality was 7500 in excess of the average of the past five years, but the rate was the same as that of 1900. The sanitary districts all participate in the variations of mortality. The infant mortality is unusually low, being 3500 less in 1900 and 2500 less than the average of the past five years.

Decrease in Tuberculosis Deaths Among Prisoners.—The Superintendent of State Prisons, in his annual report, calls attention to the great decrease in the prevalence of tuberculosis among the inmates of the prisons as a result of transferring all convicts suffering from this disease to Clinton Prison, in Clinton County. Statistics which have been prepared by Dr. Julius B. Ransom, the physician of Clinton Prison, show that from 1891 to 1895 there were 253 deaths among the prison population of the state, whereas from 1896 to 1900 there were only 72, a decrease of 71 per cent.

New York City.

Increase of Smallpox.—Smallpox is admitted by the health authorities to be on the increase. One of the students attending the University Medical College was found to be broken out with smallpox. He was hurried to North Brother Island, and vaccination on a large scale was instituted.

Mount Sinai Hospital.—The annual meeting of the hospital was held January 26. The expenses for 1901 were $119,234, and 3196 patients were treated, 2386 of whom were free patients. There has already been subscribed for the building fund $1,294,281 of the $1,650,000 required. The gifts for the year amounted to $45,045, of which $38,000 was given by individuals not of the Hebrew faith.

Reforms in the Barber Shop.—The new Commissioner of Health, Dr. Lederle, has announced his determination to institute certain reforms in barber shops. The prohibition of the use of a sponge on the face after shaving, of the use of the powder puff, of the use of alum in stick form, and of the use of a towel more than once are among the proposed changes. The new regulations are to be posted conspicuously in every barber shop, and the customers are relied upon to see that they are enforced.

Personal.—Dr. Charles G. Child, Jr., has been appointed assistant visiting gynecologist to the City (charity) Hospital. ——Dr. Warren S. Simmons has been appointed to the regular staff, Dr. William B. Brinsmade promoted to visiting surgeon, and Dr. George G. Hopkins made consulting surgeon at St. John's Hospital, Brooklyn.——Dr. George W. Salter, an eclectic physician of Brooklyn, was fined $50 for not reporting a case of smallpox. He first diagnosed the case as one of diphtheria, but when convinced that it was smallpox neglected to notify the health authorities.——Dr. William V. Paschal, who was house surgeon at St. Mary's Hospital, Brooklyn, and who by prompt operation saved the life of Robert J. MacFarland's son, has been gratefully remembered by Mr. MacFarland. A dinner was given in honor of the physician, and he was presented with a gold watch valued at $1000.——Dr. Louis W. Schultze, who was general medical inspector for the Department of Charities under the last administration, at a salary of $3000, has been removed by the new commissioner, Homer Folks.

Protest Against Exclusion of Tuberculous Aliens.—The Academy of Medicine, at its meeting, February 7, adopted the following resolutions:

WHEREAS, The Treasury Department of the United States, upon recommendation of the Surgeon-General of the Marine-Hospital Service, has recently decided to classify pulmonary tuberculosis with dangerous contagious diseases, be it

Resolved, That the New York Academy of Medicine deeply deplores this decision, which is not based either on clinical experience or on scientific experiments.

Resolved, That the Academy considers the exclusion of non-pauper tuberculous immigrants and consumptive aliens visiting our shores unwise, inhumane, and contrary to the dictates of justice.

Be it further resolved, That, while the Academy is convinced of the communicability of tuberculosis and urges all possible precautions against the spread of the disease occasioned by sputum and tuberculous food, the Academy is opposed to all measures by which needless hardship is imposed upon the consumptive individual, his family, and his physician.

Post-Graduate Needs.—Dr. John A. Wyeth has sent a letter to the daily press, setting forth to the public the needs of the post-graduate medical schools in this city, and the good work done by them. He said that wealthy and generous people had been slow to appreciate what post-graduate medical instruction meant to the state. While it was admitted that the best training in practical work for the young graduate in medicine was obtainable by serving as an interne in a hospital, not more than ten in a hundred could avail themselves of these privileges. The remaining nine-tenths must obtain their practical training by post-graduate instruction, and the need for carrying on such work in small classes and with the aid of costly laboratories made it impossible for these schools to be self-sustaining. Dr. Wyeth said that these schools deserved financial aid, not only because they attract annually from one to two thousand practitioners of medicine from all parts of the globe to New York, but for the one great reason that they are teaching physicians in practice to administer more scientifically and successfully to the sick and injured throughout the land.

PENNSYLVANIA.

Typhoid fever is still prevalent in Pittsburg, the 22 cases reported in a single day being located in 10 different wards.

Appropriation for Hospital.—The council of Allegheny has made an appropriation of $10,000 to the Allegheny General Hospital.

Smallpox Hospital Burns.—The Washington County isolation hospital at Scenery Hill has been destroyed by fire. The fire is said to have been incendiary. One patient succumbed to the exposure and excitement, and others are in serious condition.

St. Joseph's Hospital, Lancaster, at its annual meeting, appointed the following staff: Visiting surgeons, Drs. Herbert R. Bowers, Samuel T. Davis, Newton E. Bitzer and Edmund B. Ilyus; visiting physicians, Drs. George P. King, Henry E. Muhlenberg, Oliver Roland and Samuel W. Miller; consulting surgeon, Dr. George R. Welchaus; consulting physicians, Drs. John H. Grove, Philadelphia, Ambrose J. Herr and Robert M. Bolenius.

Personal.—Dr. Orion S. Rhodes has moved from East Stroudsburg, to Laramie, Wyo.——Dr. Walter D. Diefenderfer, York, has been appointed deputy medical inspector to the State Board of Health, for the Pennsylvania Railroad.——Dr. Walter Lathrop has been re-elected superintendent of the Hazleton State Hospital.——Dr. John L. Atlee has located in Lancaster. ——Dr. George F. Wise, Tyrone, has gone to Philadelphia as clinical assistant to Dr. L. Webster Fox.——Dr. Emmett A. Sprowls, West Alexander, has moved to Keokuk, Iowa.——Dr. Thomas B. Echard, Connellsville, has won a position on the resident staff of the Pennsylvania Hospital, Philadelphia.—— Dr. R. C. Craig, U. S. M.-H. Service, is to remain in Pittsburg as assistant to Dr. F. W. Meade, who has been ordered to that post from New Haven, Conn.

CANADA.

Personal.—Dr. J. F. W. Ross, Toronto, will spend the next two months at Nassau in the Bahamas.

New Laboratory at Hamilton.—The medical health officer, Dr. Langrill of Hamilton, is urging the Board of Health of that city to equip a laboratory which is especially needed for diphtheric cases. He points out that in 1901 in that city 25 per cent. of the cases proved fatal. A new Isolation Hospital is to be built.

American Medico-Psychological Association.—The fifty-eighth annual meeting of this Association will be held in Montreal June 17, 18, 19 and 20, with headquarters at the Windsor Hotel. Dr. Wyatt Johnston will deliver the annual address on the subject of "The Medico-Legal Appreciation of Trauma in its Relations to Abnormal Mental Conditions."

Tuberculin Test.—The annual meeting of the Canadian Shorthorn Breeders was held in Toronto on January 4, when a special committee on the tuberculin test reported as follows: "We, the members of the Dominion Shorthorn Breeders' Association at our annual meeting resolve that the tuberculin test is unreliable, unnecessary and in many ways injurious, and that we urge the discontinuance of the compulsory use of it by the Dominion Government Department of Agriculture."

Consulting Health Board Proposed for Montreal.—Alderman Ames, who has always taken a deep interest in all matters pertaining to the health of Montreal, is trying to have a consulting board appointed to work with the Hygienic Committee of that city. This Board is to consist of four physicians, two English and two French, and a practical plumber. A war will be at once started on privy pits as Alderman Ames has statistics to prove that the death rate is highest in those sections of the city where these exist.

Toronto Hospitals Crowded.—The Toronto Western Hospital has erected a large tent on its lawns for the accommodation of fifteen tuberculous patients. St. Michael's Hospital is full to overflowing, the corridors having been pressed into service. No patients are being admitted at the present time. Grace Hospital has just completed a new operating theater at a cost of $10,000, the gift of Lieutenant-Colonel Pellatt. In the Toronto General Hospital there are 325 patients, the largest number in residence at any one time in its history.

A New Hospital Opened.—On February 4 there was opened at St. Stephen's, New Brunswick, the Chipman Memorial Hospital by the Hon. L. J. Tweedie, Premier of New Brunswick. This hospital is beautifully situated on the banks of the St. Croix a short distance below the town of St. Stephen's, and was formerly the Chipman homestead. The grounds and buildings, thoroughly equipped with all modern appliances, were presented to the town by Lady Tilley and other heirs of the Chipman estate. It is all ready for immediate use and has accommodation for twenty beds.

Smallpox in the Province of Quebec.—The secretary of the Board of Health of the Province of Quebec, Dr. E. Pelletier, has handed out a statement which shows that during the past

year there have been 5069 cases of smallpox in that province. These have been reported from 276 localities in fifty-five out of the seventy-three counties in the province. The percentage of deaths was small, reaching to about one per cent. Three hundred and twenty-four municipalities have notified the Board of Health that they have adopted the compulsory by-laws relating to vaccination promulgated by the provincial health authorities.

FOREIGN.

Escherich Called to Vienna.—T. Escherich, professor of pediatrics at Graz, has been summoned to the similar chair at Vienna.

Von Leyden and Kussmaul Enter the Eighties.—The friends of von Leyden and Kussmaul are preparing to celebrate their eightieth birthdays, the former April 20, and the latter February 22.

Krafft-Ebings Successor.—Professor von Krafft-Ebing retires from the chair of psychiatry at Vienna with the present term. Professor W. von Jauregg has been appointed his successor, and Professor G. Anton takes the place of the latter.

Jubilee of Professor Tamburini.—A medal was presented to Augosto-Tamburini, December 15, the occasion being the twenty-fifth anniversary of his professorship. His work at the Reggio-Emilia Asylum for the Insane has made his name prominent among the leading alienists of the world, the founder of a school of psychiatry, which has contributed many important works to science and trained many distinguished alienists.

Deaths in the Profession Abroad.—H. Pernice, professor of gynecology at Greifswald.——A. Gougenheim, a prominent laryngologist of Paris, editor of the *Annales des Mal. de l'Oreille*.——Dr. Le Baron, the founder of the Syndicat des Médecins de la Seine.——Dr. Soupart, honorary president of the Federation Med. Belge, died in December at Ghent, in his 92d year. His works on amputations have been numerous and important contributions to science.——Dr. E. Cramer, professor of hygiene at Aachen. Dr. G. Garibaldi, professor of surgery at Genoa.

The Income of Physicians in France.—If we are to judge from an item in a recent issue of *The British Medical Journal*, the income of physicians in France is as variable as is the income of medical men in this country. The item referred to is based on a statement recently made by a responsible French writer, M. Chaillysett, from which it appears that there are in Paris 2,600 physicians. Of these, 40 earn from $40,000 to $60,000 a year, 50 earn $20,000 a year, 50 from $10,000 to $20,000, 200 from $6000 to $10,000, 200 from $4000 to $6000, whilst 1700 earn on an average $620. In the whole of France there are 16,000 practitioners, whose average professional earnings are less than $600 a year, and this amount does not represent net but gross earnings.

LONDON LETTER.

The Smallpox Epidemic.

There are now 892 cases in hospital. For the week ending January 18 the number was 877, against 666, 754 and 873 for the 3 preceding weeks; 213 new cases were admitted during the week against 266, 261 and 306 in the 3 preceding weeks. Thus the rate of increase has been checked somewhat. The number of deaths were 55, against 45, 28 and 25 of the preceding weeks. Of 2000 cases which have occurred since August about 200 have occurred in common lodging houses and shelters, and a large number of the remainder among individuals living in tenement houses. The London County Council has taken an active part in the controlling of the epidemic. Their inspectors detected and isolated 44 cases of smallpox in common lodging houses earlier than would otherwise have been possible, and so the spread of the disease was checked. Since the early part of October 41 cases of smallpox have been associated with an antecedent illness said to have been chicken-pox. But this number by no means represents all the cases in which chicken-pox was mistaken for smallpox, as the information was supplied only incidentally. The committee of the London County Council therefore recommend that chicken-pox should be made a notifiable disease in London for 3 months. Probably 500 or 600 cases a week would be notified, which at the rate of 2s 6d a certificate would cost £70 ($350) weekly. Already 7 of the London boroughs have taken this action.

A Scheme for Cancer Research.

Since the King, in his reception of the representatives of foreign countries at the Tuberculosis Congress, referred to the desirability of taking steps to check the ravages of cancer, the necessity of organization for research has been frequently discussed. At last a project has taken shape and will soon be formally submitted to the College of Physicians and Surgeons for approval. As it has already received the support of eminent men who hold or have held high office in these colleges —the president and censors of the Royal College of Physicians, the president and vice-presidents of the Royal College of Surgeons, Lord Lister, Sir William Broadbent, Sir Richard Douglas Powell, Sir Thomas Smith and Sir John Williams—it will probably be approved of by these bodies. It is proposed to raise a fund to (1) endow laboratories devoted exclusively to cancer research, (2) provide an honorarium for the director of cancer research, (3) provide paid assistants to the director and grants in aid of cancer researches within the United Kingdom or in the British dominions beyond the seas, (4) assist in the development of the cancer research department of the Middlesex Hospital or any other hospital where a cancer research department may be provided, (5) provide for the investigation of any method which may from time to time be brought forward for the prevention, treatment or cure of cancer and arrange for the testing under proper supervision of any so-called remedy for cancer, (6) provide means for systematic investigation of the causes, prevention and treatment of cancer. There will be five trustees, in whose name all moneys will be invested. The income will be administered by a committee consisting of these trustees, the president, and two censors of the Royal College of Physicians, the president and vice-presidents of the Royal College of Surgeons, the laboratory committee of the Royal College of Physicians and Surgeons, and a member of the Local Government Board. It is estimated that $500,000 will be required. Both the King and Prince of Wales have expressed sympathy with the scheme.

Smallpox in Glasgow.

The outbreak of smallpox in Glasgow continues to increase. In hospital are 44 cases and a reception house has been opened in which 35 suspects have been lodged.

Sir William MacCormac's Will.

The net personal estate of the late Sir William MacCormac amounts only to $110,000. His widow is sole executrix and legatee.

Plague in India.

The returns for the week ending December 21 show 9198 deaths in all India, against 7795 in the preceding week and 2267 in the corresponding week of last year. One result of the plague is that the city of Bangalore has been largely reconstructed. Of the 10,800 houses, 1922 have been demolished and 5½ miles of new streets have been made. The superintending engineer reports that for symmetry, regularity of frontage, accessibility by the shortest routes, air spaces, public squares, convenience of conservancy and perfect drainage they can be equaled only by some of the most recent cities of America.

Married.

J. E. BERRY, M.D., to Miss Anna Taylor, both of Alledonia, Ohio, at Chicago, January 25.

TALBOT C. GERNON, M.D., to Miss Ada A. Kuhns, both of Bloomington, Ill., January 29.

WILLIAM F. GILLAN, M.D., of Pawtucket, R. I., to Miss Josephine Coveney, of Cambridge, Mass., January 29.

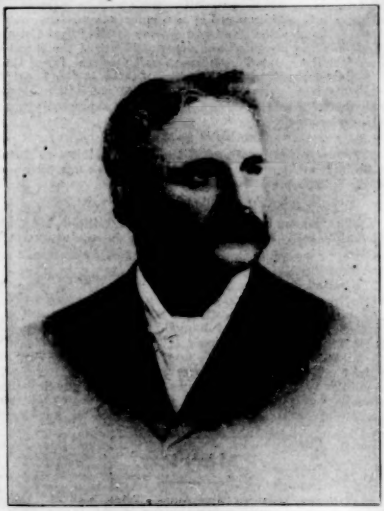
WILLIAM B. MURPHY, M.D., of Minneapolis, Minn. to Miss Amelia C. Heiker, a professional nurse, of St. Paul, Minn., at Faribault, Minn., January 29.

HENRY S. WILLARD, M.D., formerly attached to the Topeka Insane Asylum, to Miss Georgia Brocks, both of Manhattan, Kans., at Kansas City, January 29.

Deaths and Obituaries.

Paul Fortunatus Munde, M.D., was born September. 7, 1846, in Dresden, Saxony. When the boy was 3 years of age his father was exiled from Germany and settled in Florence, Mass. He received his early education in the Latin School of Boston, began his medical studies in the Medical Department of Yale University, but attended his two last courses of lectures at Harvard University Medical School, Boston, and was graduated in 1866. During the Civil war he was acting medical cadet in the army for six months during 1864. After his

graduation he went abroad and served as volunteer assistant-surgeon in the Bavarian service in the war between Prussia and Austria. A year later he became resident physician at the Wuerzburg maternity and was assistant to the German gynecologist, Scanzoni. At the onset of the Franco-German war he offered his services and was made battalion surgeon with the rank of first lieutenant in the German army. After the close of the war he studied in Vienna for nearly two years, and there was given the degree of Master in Obstetrics. After continuing his studies in Heidelberg, Berlin, London, Edinburgh and Paris, he returned to the United States and located in New York City, where he established himself as a specialist in gynecology and obstetrics. In 1874 he became editor of the *American Journal of Obstetrics* and held this position until 1892, when pressure of other duties caused his resignation. He was made professor of gynecology in the New York Polyclinic in 1882, professor of gynecology in Dartmouth Medical College in the summer term of 1880, and was gynecologist to the Mt. Sinai Hospital, St. Elizabeth's Hospital and the Italian Hospital. He was a member of the Medical Society of the County of New York, a fellow of the New York Academy of Medicine, a member and president of the New York Obstetric Society, a member and vice-president of the American Gynecological



PAUL F. MUNDE, M.D.

Society and the British Gynecological Society, a member of the German Gynecological Society, and a corresponding fellow of the Obstetrical Societies of Edinburgh, Leipzig and Philadelphia. He contributed a number of important papers to the literature, and, in addition, was the author of standard works on surgical gynecology and minor surgical gynecology, and, in connection with Dr. Thomas, of a "Practical Treatise on the Diseases of Women." He died at his home in New York City, February 7, after a prolonged illness, from heart disease. He rallied in January and expected to take a trip to the South, but suffered a relapse and steadily declined thereafter.

John T. Metcalfe, M.D. University of Pennsylvania, 1843, who died of senility, January 30, at his home in Thomasville, Ga., was for many years in the front rank of his profession in New York City. He was the son of a physician, and was born in Natchez, Miss., in 1818. He graduated from West Point in 1838, and after a short service in the army, resigned to take up the study of medicine, completing his training in Europe. He then came to New York City, where his quickness of perception, readiness in analysis, remarkable memory and keen judgment soon built up a practice. He began in the days before anesthesia and the clinical thermometer, and his calls in those early days were made on horseback. Dr. Metcalfe was a member of the New York Medical and Surgical Society, the County Medical Society, the New York Society for the Relief of Widows and Orphans, the New York Pathological Society, the New York Academy of Medicine, and the New York Physicians' Mutual Aid Association. He was for many years lecturer at the New York College of Physicians and Surgeons, and at the time of his death he was emeritus professor of clinical medicine. He had retired from practice about fifteen years ago. Dr. Metcalfe had been consulting physician to Bellevue, Roosevelt, St. Luke's and the Woman's Hospitals, to the Hospital of the New York Society for the Relief of the Ruptured and Crippled, and to the New York Orthopedic Dispensary and Hospital.

Samuel A. Bonesteel, M.D. University of Michigan, 1867, and McGill University, Montreal, 1870, one of the prominent physicians of Denver, Colo., died at his home in that city, January 29, aged 60, from pneumonia complicating diabetes. Dr. Bonesteel is said to have enjoyed one of the most lucrative practices in Denver for ten years past, and was a member of the Denver and Arapahoe Medical Society and of the Colorado State Society. He was a native of British Columbia, and, before his removal to Denver, practiced in Columbus and Lincoln, Neb. While at Columbus he was one of the chief surgeons of the Burlington and Missouri River railroad, and in Denver was for a time connected with the Denver and Rio Grande road.

Charles A. Harnish, M.D. University of Pennsylvania, 1891, died, January 2, at the Presbyterian Hospital, Philadelphia, of laryngeal tuberculosis, aged 35. His death ends a long and successful practice in Alexandria, Pa. He was a member and ex-president of the Huntingdon County (Pa.) Medical Society, a graduate fellow of the William Pepper Medical Society of the University of Pennsylvania, a member of the State Medical Society and of the American Medical Association.

Henry R. Baldwin, M.D. College of Physicians and Surgeons, New York, 1853, one of the most prominent physicians of New Brunswick, N. J., where he had practiced for forty years, a trustee of Rutgers College, president of the New Brunswick Board of Health, and a member of the American Medical Association, died at his home in New Brunswick from pneumonia, February 3, aged 73.

William A. Dudley, M.D. University of Pennsylvania, 1850, died, February 1, of pneumonia, at his residence in Petersburg, Va., aged 72. He had practiced medicine in that city for nearly half a century, and at one time was a member of the city council. Wealthy, and of one of the first families of Virginia, he had lived alone in most eccentric fashion for many years.

Edwin Schwartz, M.D. Rush Medical College, Chicago, 1881, died at his home in Knoxville, Ill., February 4, aged 48, of complications following pneumonia. He was for a long period house physician of the Knox County Almshouse, and was a member of the Military Tract Medical Society and of the American Medical Association.

Francis M. Black, M.D. Starling Medical College, Columbus, Ohio, 1852, a prominent physician of Fayette County, Ohio, a veteran of the Civil war, in which he served as captain in the Nintieth Ohio Volunteers, and president and director of a bank in Washington Court House, died at his home in that place, January 20, aged 74.

Arthur B. Hagen, M.D. Tulane University, New Orleans, 1897, of Leger, O. T., died in Dallas, Texas, January 18, from appendicitis, aged 33. Dr. Hagen was a member of the U. S. Marine-Hospital Corps during the yellow fever epidemic at New Orleans, and later went to Cuba as surgeon during the late war.

Luther W. Allingham, M.D. Trinity Medical College, Toronto, Ont., 1889, who was obliged to locate in California on account of his health, and practiced at Big Pine and Independence, Inyo County, died at Randsburg, January 29, from consumption, aged 39.

Joseph Wilkins, M.D. University of Maryland, 1847, a retired physician, died at Baltimore, February 5, aged 78. After graduation, Dr. Wilkins studied diseases of the eye and ear in Paris, but he practiced only a short time, retiring to devote himself to mining.

Benson G. Connor, M.D. Castleton (Vt.) Medical College, 1846, a retired physician, aged 80, of Waxahachie, Texas, died February 1, of injuries received in falling from a window.

Henry W. Foster, M.D. Detroit (Mich.) Medical College, 1879, of Bozeman, Mont., died of heart failure at St. Mary's Hospital, Minneapolis, Minn., February 3.

Zenas T. Garland, M.D. Medical College of Ohio, Cincinnati,

1871, one of the most prominent physicians in his section of Ohio, died at Clarksville, February 2, aged 60.

Lock E. Houston, M.D. Tulane University, New Orleans, 1893, of Aberdeen, Miss., died of heart failure at Memphis, Tenn., January 19, aged 38.

Alexander L. Williamson, M.D. College of Physicians and Surgeons, Keokuk, Iowa, 1883, died at his home in Humboldt, Neb., February 4.

Walton Saunders, M.D. University of Maryland, Baltimore, 1856, formerly of Essex County, Va., died in San Francisco, Cal., February 2.

George W. Hudson, M.D. Rush Medical College, Chicago, 1870, died at his home in Bethany, Ill., January 21, from pneumonia, aged 59.

Charles E. Woodward, M.D. Jefferson Medical College, Philadelphia, 1864, died at New Egypt, New Jersey, January 25, of nephritis.

Cassius O. Jackson, M.D. University of Buffalo, 1880, died of pneumonia at the age of 47 at his home in Victor, N. Y., January 26.

Moses W. Speer, M.D. Southern Medical College, Atlanta, Ga., 1883, died at his home in Chattanooga, Tenn., aged 46, January 29.

Irvine W. Gilkeson, M.D. Jefferson Medical College, Philadelphia, 1868, died in his home at Mint Spring, Va., January 26, aged 58.

Joseph W. Keene, M.D. Harvard University, 1878, died at his home in Fallbrook, Cal., January 30, from apoplexy, aged 54 years.

Correspondence.

Skilled Anesthetizers.

CHICAGO, ILL., Feb. 5, 1902.

To the Editor: In THE JOURNAL of January 25, Dr. Holmes reports a death from chloroform. This report should not be allowed to pass without some comment and perhaps a word of criticism. Scarcely a week passes that does not bring me rumors of deaths or narrow escapes from death from anesthetics, but the reports on such occurrences are altogether too infrequent. We get reports from everything else that happens in surgery, but there seems to be a "conspiracy of silence" which will not allow occurrences in this field to be published. There is no disposition to criticise the person who gave this anesthetic; for all I know he may have been a skilful anesthetizer and every one who administers anesthetics is liable to this experience. Using some of the statements of Dr. Holmes as a text I would like to point out some of the factors which contribute to such deplorable accidents. In the first place, the surgeon and the anesthetizer should be in perfect sympathy and work in harmony. The anesthetizer is naturally anxious to make a good impression on the surgeon the first time they have a case in common and when the patient interferes with the operation by struggling, the anesthetizer feels that he must give more anesthetic in a hurry, and he is likely to carry the anesthesia as far in the other direction. I have many times seen the anesthetized pick up the bottle when the patient began to move and pour on more of the anesthetic than he would dare to use at the beginning of the anesthesia. The patient is already pretty well saturated with the drug and possibly taking deep inspirations from the pain of the operative procedures, and he may get an overwnelming amount of the anesthetic. Concentrated chloroform vapor and deep inspirations form a dangerous combination.

Resuscitation should not be "tardily begun." The anesthetizer must be on the alert every instant, and if he is, trouble can scarcely exist for five seconds without detection. Valuable time should not and must not be lost, whatever is to be done must be done quickly. I hardly see how a patient requiring artificial respiration can safely be taken from one room to another.

The report closes with the remarkable statement that a man who once gives ether is ever after unfitted to give chloroform. I see but one inference to be drawn from this statement, and it is that the anesthetizer thinks the amount of the anesthetic used is a guide to the patient's condition instead of the patient's condition being a guide to the amount of the anesthetic to be used. I have had too much instruction from Dr. Holmes to believe that he really intended to imply such a thing. If this rule regarding anesthetics is to be observed, then we must insist that a man who has once amputated a leg should never thereafter be permitted to operate upon the neck lest he should carelessly or thoughtlessly amputate the patient's head. Then we will require experts to give gas and experts to give ether, others to give chloroform and still others to give bromid of ethyl and so on to the end of the catalog of anesthetics. Then, as it is sometimes necessary or desirable to use two or three different anesthetics during the course of one operation, we will require at all operations the attendance of as many anesthetizers. There is no doubt that a man may and usually does become more skilful in administering one anesthetic than another, just as an operator becomes more skilful in performing an operation which he does frequently than another which he performs less often; but if a man is expert in the use of one anesthetic he can soon acquire skill in the use of any other. If a man is to be restricted to the administration of but one kind of anesthetic then the anesthetic to be used will depend on who happens to be called in to give it and not on the indications in the case. In other words, the case will be made to suit the anesthetic and not the anesthetic to suit the case. There has been too much of that already in surgery, let us not have it also in anesthetics. I have heard of a doctor who operated on the rectum of every patient who consulted him with little regard to indications in the case, another under the same circumstances would remove the appendix, another the ovaries, another the uterus, the operation being suited to the doctor and not to the case; in other words, the operation or the anesthetic would depend on what doctor a man happened to consult rather than on the disease he happened to be afflicted with. This would be specialism run riot. D. H. GALLOWAY.

Societies.

Upper Des Moines (Iowa) Medical Association.—The fourth semi-annual meeting of this Association will be held at Estherville, February 20.

Atlantic County (N. J.) Medical Society.—This Society, at a meeting held February 5, elected Dr. Wm. Edgar Darnall, president; Dr. Theodore Senseman, vice-president; Dr. Edward Guion, secretary and treasurer, and Dr. A. Burton Shimer, reporter.

Comanche County (Okla.) Medical Society.—This Society held its annual meeting at Lawton, January 20. Dr. A. X. Campbell was elected president; Dr. F. E. Rosenberger, vice-president; Dr. C. M. Maupin, secretary, and Dr. W. M. Turner, treasurer.

Morgan County (Ill.) Medical Society.—The following officers were elected, December 12: President, Dr. P. C. Thompson; vice-president, Dr. David Reid; secretary, Dr. T. A. Wakely; treasurer, Dr. E. F. Baker; and librarian, Dr. T. J. Pitner, all of Jacksonville.

Cincinnati Obstetrical Society.—At the last meeting of this Society, Dr. Julia W. Carpenter was elected president; Dr. William Gillespie, vice-president; Dr. Magnus A. Tate, secretary; Dr. Edward S. McKee, corresponding secretary, and Dr. Chauncey D. Palmer, treasurer.

Harrisburg (Pa.) Academy of Medicine.—At the annual meeting of the Academy, held January 31, Dr. Hugh Hamilton was elected president; Drs. J. Walter Park, first vice-president; Dr. David S. Funk, second vice-president; Dr. Thomas S. Blair, secretary, and Dr. E. Harold James, treasurer.

Brashear (Ky.) Medical Society.—The regular quarterly meeting of this Society was held at Bardstown, Ky., January 21. Dr. W. E. Shepherd, Taylorsville, president; Dr. Joseph L. Pope, Bardstown, vice-president, and Dr. Wiley Rogers, Taylorsville, secretary. The next meeting will be held in Springfield, April 15.

Alameda County (Cal.) Medical Society.—At the meeting held in Oakland, January 14, this Society elected the following officers: Dr. Edmund J. Overend, president; Drs. Oliver D. Hamlin, W. Gray Smith and Wilbur J. Wilcox, vice-presi-

dents; Dr. Albert H. Pratt, secretary, and Dr. Charles A. Dukes, treasurer, all of Oakland.

Steele County (Minn.) Medical Society.—This Society had its annual meeting and supper at Owatonna, February 4, at which time the following officers were elected: President, Dr. George Schulze, Owatonna; vice-president, Dr. Albert A. Finch, Blooming Prairie; secretary, Dr. Allan B. Stewart, Owatonna, and treasurer, Dr. Warren C. Eustis, Owatonna.

Aux Plaines Medical Association.—The association of regular physicians of the western and southwestern suburbs of Chicago which was organized as the Suburban Medical Society, Dec. 27, 1901, has changed its name to the Aux Plaines Medical Association—a name which more clearly expresses its territorial scope. The Association was given a banquet at Maywood, January 24.

Cripple Creek District (Colo.) Medical Society.—This Society met in regular monthly session, January 14, in Cripple Creek. The semi-annual election of officers resulted as follows: For president and secretary: Drs. George McKenzie, Victor, and M. D. Gibbs, Cameron, were unanimously re-elected; for vice-presidents: Drs. Wilbur T. Liggett and Magruder, Cripple Creek; and Dr. Haskell M. Cohen, Victor, were elected; for treasurer, Dr. Sipe, Cripple Creek, was elected.

Chautauqua County (N. Y.) Medical Association.—At the annual meeting of this branch of the New York State Medical Association, held in Jamestown, January 23, the following officers were elected: Dr. William M. Bernus, Jamestown, president; Drs. Orrin C. Shaw, Cassadaga, and Era M. Scofield, Jamestown, vice-president; Dr. Henry A. Eastman, Jamestown, secretary and treasurer; Dr. H. Francis Hunt, Dewittville, chairman of the executive committee, and Drs. Walter Stuart, Westfield, Thomas D. Strong, Westfield, and Henry A. Eastman, Jamestown, fellows of the State Medical Association.

Medical Society of the District of Columbia.—At the meeting of the Society, held on the 29th inst., Dr. W. W. Johnson read a paper on "The Diagnosis and Treatment of Influenza and Pneumonia." Dr. Acker presented an interesting case and specimen of tuberculosis. Dr. Franzonie presented a case and specimen of malignant disease of the lungs and rib. Dr. Bowen reported a case and specimen in the interest of conservative gynecology in a young girl 17 years of age. He removed an ovarian cystic tumor from one side and a cyst of the tumor on the opposite side, leaving a portion of the healthy ovary and the tubes. The president, Dr. S. S. Adams, announced the following standing committees for the year: Public health, J. W. Chappel, chairman; essays, T. C. Smith, chairman; editing transactions, D. S. Lamb, chairman; executive, W. W. Johnson, chairman. The president has organized a committee on prize essay, and secured the necessary funds by subscription. The competition will be open only to the younger men of the society, those graduating since 1890. It is proposed to give an annual prize of $100 for the best essay written in competition during the year. Especial arrangements for awarding the prize and passing upon the merits of the essay will be decided by a sub-committee of the executive committee.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Ninety-sixth Annual Meeting, held in Albany, Jan. 28-30, 1902.

(Concluded from page 413.)

The President, Dr. Henry L. Elsner, of Syracuse, in the Chair.

The Constitutional State versus Catarrhal Deafness.

DR. SARGENT F. SNOW, Syracuse, presented a very important and practical aspect of the treatment of these cases, but one that was too often overlooked or its importance under-estimated. Personal hygiene was considered by him as of the very first importance, for an inactive skin or a torpid liver would often effectually thwart the best efforts at local treatment.

DR. J. O. ROE thought that nine-tenths of the cases of "colds" were caused by functional derangements of the internal organs rather than by exposure to cold.

DR. EDWARD B. ANGELL, Rochester, in a paper on "Educational Management of the Neurasthenic," spoke of the value of suggestion, and of the necessity for a carefully graded system of education for this class of invalids.

DR E. F. BRUSH, Mount Vernon, reported "An Epidemic of Typhoid Fever in the Backwoods of Maine," which was of interest because of its isolation, and also because the boy first taken sick infected others in the family by drinking from a barrel of water and throwing some of the water back.

DR. A. T. BRISTOW, Brooklyn, in connection with the report of a "Case of Strangulated Hernia of the Left Ovary and Tube," said that in many of these cases there were other congenital defects, especially of the genital tract. The inguinal variety was most common, but all cases of hernia of the ovary require operation.

Toxic Dosage in the Treatment of Some Nervous Diseases.

DR. WILLIAM C. KRAUSS, Buffalo, read a paper with this title. He asserted that the usual dosage given for bichlorid of mercury, for example, i. e., 1/20 to 1/10 of a grain, was of no avail in cases of brain syphilis. Here the drug should be given hypodermically in doses of one or two grains daily, and if so given the guminata would quickly melt away. Although the ordinary dosage of Fowler's solution of arsenic was from one to ten minims, he had obtained good results in some cases of chorea from giving 30 to 60 minims, three times a day. In certain neuralgic and neuritic disorders marked benefit would result from giving large doses of nitroglycerin.

DR. HENRY R. HOPKINS, Buffalo, said that during the past year he had obtained exceptionally good results in the treatment of severe cases of delirium tremens by a venesection of one or two pints, followed immediately by infusing double the quantity of normal salt solution.

DR. CARL BECK, New York City, said that in the "Pathology of the Tissue Changes Caused by the Roentgen Rays," after prolonged exposure the hair would be found altered in structure, and the blood vessels of the integument narrowed in caliber.

DR. LUCIEN HOWE, Buffalo, exhibited a head-rest useful in connection with "The Position of the Eye at Rest," and said that, in order to find the position of the eye the light should be allowed to fall on the macula of one eye, and then by interposing a prism, the image of the other eye would be thrown off the macula. As there was no tendency to fusion, under such conditions, the eye would assume the position of greatest ease.

DR. A. D. LAKE, Gowanda, read a paper on the "Civilized Indian; His Physical Characteristics and Some of His Diseases." He showed how the Iroquois Indians had degenerated physically since they had adopted the manners and customs of their civilized neighbors, and said that many of them die young, and that they show a special susceptibility to tuberculosis. On the other hand, they had become practically immune to syphilis, though there was evidence that it had raged among them years ago. Another effect of civilization had been to largely increase the diseases peculiar to women.

Symposium on Paresis.

DR. ARTHUR W. HURD, Buffalo, opened the symposium by a consideration of the etiology. He quoted statistics from many sources to prove the important part played by syphilis, as well as to show that in places where syphilis was rare paresis was correspondingly infrequent. It was probable that the great mental strain of the present age was also an important factor.

DR. FRANCIS X. DERCUM, Philadelphia, contrasted the symptoms of the neurasthenic with those observed in the early stage of general paresis. The symptoms of the neurasthenic were almost wholly subjective; the patient was anxious to describe them. He was usually worst in the morning and best late in the day; on the other hand, the paretic rarely sought medical advice of his own volition; he left it to others to describe and point out his deviations from the normal. He was at his best early in the day, while in the evening defects of speech and mentality might be present that were not discoverable in the morning. He early exhibited fatigue, impairment of memory, and an indifference to the details of everyday life, and was occasionally guilty of breaches of etiquette. Perhaps the most characteristic sign was the peculiar manner of the paretic: the slight changes in the expression of the face, and the gestures which indicated that he was not in close touch with his surroundings.

DR. CHARLES G. WAGNER, Binghamton, took up the "Comparative Frequency" of the subject. He said that, according to Dr. Bell, of the McLean Asylum, paresis had not come under his observation in this country until after 1840, though he had seen many cases abroad. According to the reports of the Lunacy Commission, 49,787 persons had been admitted to the hospitals of the state, and of this number, 3307, or 6.6 per cent., were cases of paresis. In the Manhattan State Hospital, where more than two-thirds of the inmates are of foreign birth, the records show a remarkable preponderance of the disease among native Americans. The disease was gradually increasing in frequency.

DR. EDWARD COWLES, of Boston, Mass., considered the "Treatment of Paresis; Its Limitations and Expectations," and stated that the limitations of treatment were evident from a lack of a rational basis for our therapeutics. Hospital experience was opposed to the use of antisyphilitic medication except in cases in which syphilis was actively present. Tonics, and hydrotherapy were useful.

DR. GEORGE THOMAS JACKSON, New York City, read a brief paper on "Ringworm; A Note on Its Treatment." The most effective remedy for ringworm of the hairy parts that he had ever used was an ointment composed of one dram of crystalline iodin to one ounce of genuine goose-grease. It should be applied twice a day until there is a little swelling of the patches, and then once daily until cured. No epilation is necessary.

Case of Epilepsy with Possible Medicolegal Complications.

DR. FREDERICK SEFTON, Auburn, reported this case. The patient had developed epilepsy after having been very roughly handled by some college mates who were initiating him into a secret society. He apparently recovered quickly, but some months later became moody and irritable, and then suddenly one evening shot at his sister. The next day he was again almost himself, but he never was able to recall any of the happenings of that eventful night. He was finally given the position of purser on a ship, still occupied that position, and had apparently recovered. The case was interesting because it was evident that, under the present mode of procedure in court, it would have been easy to secure testimony as to this man's responsibility for his acts.

DR. WILLIAM BROWNING, of Brooklyn, said that where fright was the cause of epilepsy the latter usually developed within a few hours or days. These patients with psychic epilepsy rarely do violence to others unless interfered with.

Leucocytes as an Aid to Diagnosis and Prognosis.

DR. THOMAS R. BROWN, Baltimore, placed the normal number of leucocytes at 6500 to the cubic millimeter. He said that the leucocyte count had proved very useful in connection with typhoid, malaria, tuberculosis, influenza, scarlet fever, diphtheria and pneumonia. The absence of leucocytosis in an uncomplicated tuberculosis served to differentiate it from other diseases, while its presence pointed to secondary infection. There was reason for believing that the leucocyte count may, in the future, aid in detecting secret drug habits. In cases of appendicitis it was of great value to the surgeon.

The Value to the Physician of Modern Methods of Diagnosis.

DR. HENRY L. ELSNER, of Syracuse, delivered the Presidential Address. He spoke of the advances made in the diagnosis of diseases of the stomach by chemical analysis of the stomach contents, the determination of the size and contractility of the organ, and its location in the body. The benefit derived from the use of the iodids in syphilitic disease of this organ and the intolerance under other conditions was mentioned as a useful point in differential diagnosis. The speaker then considered the aid that had been derived from the use of the centrifuge, the value to the surgeon of the *x*-rays, and their possible help to the physician. After speaking at length upon the new science of hematology, he closed by urging general practitioners to take advantage of these new methods of precision.

DR. SAMUEL M. BRICKNER, New York City, in a paper on a "New Symptom in the Diagnosis of Dystocia Due to a Short Cord," said that the occurrence of urination with the cessation of each pain during the second stage he had come to look upon as a pathognomonic sign of a short funis. If to this were added a marked and jerky recession of the head of the fetus with the ending of each uterine contraction, one might feel quite sure that the cord was unduly short.

Symposium on Diseases of the Pancreas.

PROF. R. H. CHITTENDEN, New Haven, Conn., opened this symposium by a consideration of the physiology. He described the production of experimental pancreatic diabetes, and the deductions therefrom, and added that to the physiologic chemist the auto-intoxication theory of diabetes seemed plausible.

DR. W. S. THAYER, Baltimore, said that interference with the digestion of albuminoids was suggestive of pancreatic disease. Acute pancreatitis was associated with agonizing epigastric pain, tenderness and rigidity of this region, an acceleration of the pus and sometimes with cyanosis. Collapse and death often occurred in four or five days. Some had claimed that it was possible to find a fat-splitting ferment in the urine; if so, we would have the first definite sign of pancreatitis. The diagnosis of chronic interstitial pancreatitis was rarely possible.

DR. ROSWELL PARK, Buffalo, described the various routes by which the pancreas might be reached, and pointed out the danger of wounding important vessels and nerves. The route usually selected was in front through the gastrocolic omentum. Posterior drainage would usually be required. The treatment of acute pancreatitis was virtually that of peritonitis of the upper abdominal cavity, and consisted in prompt drainage.

DR. GEORGE BLUMER, Albany, said that in many cases of diabetes the pancreas appeared normal, except for a hyaline degeneration of the islands of Langerhans. It was now believed that the true cause of fat necrosis was the presence of the fat-splitting ferment, and any pancreatic lesions allowing of the escape of this ferment might cause fat necrosis.

DR. JOSEPH C. BLOODGOOD, Baltimore, in a paper on "Clinical Indications for Surgical Interference in Acute Pancreatitis," said that before abscess formation operation was contraindicated, but after its occurrence no time should be lost in establishing drainage. Out of 39 cases of pancreatic abscess the onset in 23 had been very acute, the symptoms being those of acute pancreatitis. Six out of 24 cases operated upon recovered.

DR. DENSLOW LEWIS, Chicago, presented in this paper an account of a large number of curious "Traumatisms of Pregnancy," and of remarkable recoveries from the same.

DR. ARTHUR W. ELTING, Albany, in a paper on "Tendon Transplantation in the Treatment of Paralytic Deformities," said that tendon transplantation should not be done so long as there was evidence of spontaneous improvement. It was especially useful in loss of muscles and tendons from injury, in spinal infantile paralysis, in spastic paralysis, and certain congenital deformities, such as club-foot.

DR. J. MILTON MABBOTT, New York City, reported a case of "Pneumogalactocele, with an Unidentified Organism," in which the breast of a primiparous woman became the seat of a tumor containing milk and gas. It developed at the end of the third week. Bacteriologic examination showed the presence of a micro-organism, which was apparently non-pathogenic, but it could not be identified.

DR. ROWLAND G. FREEMAN, New York City, in an essay on a "Simple Method for Determining Percentage of Milk in Home Modifications," endeavored to simplify the calculations by eliminating algebraic formulæ, noting the proportion between the fats and proteids, and then selecting a cream containing the same proportion. Thus, with the formula, fat 3, sugar 6, proteids 1, the proportion is 1 to 3; therefore 12 per cent. cream should be used as the basis, diluting it with water. The sugar is added separately.

Banquet.

The evening was the occasion of an unusually enjoyable banquet. No less than 319 took part, and made merry to a late hour. Governor Odell made an address, in which he begged them not to be unduly anxious about the osteopathy bill, for, if it should happen to slip through the legislature, he would take care of it. He would hardly have taken them so much into his confidence if it had not been that that very afternoon

the public hearing on this bill had been given, and the osteopaths had made a very feeble showing.

DR. HEINRICH STERN, New York City, read a paper on "Obesity of Adolescence." He divided these cases of obesity into those disappearing at the approach of maturity and those continuing after full development had been reached. The latter class he designated as "metabolic," and asserted that they were dependent upon faulty thyroid or parathyroid activity. Neither variety of obesity demanded treatment unless the weight was excessive. In the advanced metabolic cases the treatment was mainly dietetic.

DR. REGINALD H. SAYRE, New York City, read some "Observations on Broken Necks," and exhibited a series of plates illustrative of this class of cases. If the upper three vertebræ were involved, the head would usually assume the position of a torticollis, but in some instances there was an obliteration of the normal curve of the back of the neck. The vertebræ required support for a much longer time than was generally believed. A good plan was to envelop both head and chest in plaster of paris.

Election.

To State Board of Examiners: Dr. A. Walter Suiter, of Herkimer, and Dr. George R. Fowler, of Brooklyn.

Officers of Society: President, Dr. Henry R. Hopkins, Buffalo; vice-president, Dr. William A. Moore, Binghamton; secretary, Dr. Frederic C. Curtis, Albany; treasurer, Dr. O. D. Ball, Albany.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

PRESCRIPTION WRITING, XIII.

(Continued from page 419.)

Inhalations and Atomization.

It is yet a question as to just how much of the respiratory tract is reached by these two methods. That good results can be obtained by this form of treatment in dealing with diseased conditions of the nasal mucous membrane of the pharynx, larynx, trachea and upper bronchi, there can be no doubt. Volatile preparations may be vaporized and the vapor inhaled; non-volatile substances may be dissolved in any good menstruum and, when placed in an atomizer, made to form a very fine spray. The vehicle or menstruum may be liquid petrolatum, glycerin or water. Powders may be employed by means of insufflation.

The following combinations are recommended by E. Fletcher Ingals as local treatment in the different diseases of the respiratory tract:

AS AN INHALATION.

R.	Formalin	m. xv	1
	Menthol	℥ss	2
	Tinct. iodi	℥ii	7 50
	Alcoholis	℥i	30

M. Sig.: Use in a small inhaler four or five times a day, continuing five minutes each time. This is used in cases of chronic laryngitis and laryngo-trachitis and for five minutes at each inhalation or until the patient can feel its effects in the trachea for several minutes after stopping the inhalation. If this does not seem strong enough the following may be used:

R.	Menthol	℥i	3 75
	Formalin	m. xx	1 33
	Tinct. iodi	℥iii	11 25
	Alcoholis	℥i	30

M. Sig.: Use as an inhalation four or five times daily.

In cases of subacute laryngo-trachitis the following is sometimes employed:

R.	Tinct. benzoini comp.	℥i	30

Sig.: Pour a teaspoonful in a small vessel of hot water and allow the patient to inhale the vapors by placing the mouth over the vessel and covering the head with a cloth in order to retain the vapors. This may be repeated every two or three hours if necessary.

The following is used as an inhalation in cases of acute and subacute trachitis and bronchitis:

R.	Thymol	gr. ss	03
	Menthol	gr. x	66
	Liq. petrolati	℥i	30

M. Sig.: Place in an inhaler and use two or three times daily.

As a spray to be used in an atomizer:

R.	Iodi (5 per cent.)	m. xv	1
	Menthol	gr. x	66
	Liq. petrolati	℥i	30

M. Sig.: Use as a spray once or twice daily.

The foregoing is used in cases of chronic laryngitis, pharyngitis and in rhinitis accompanied by dryness of the membranes. It may also be employed when chronic inflammation of the Eustachian tube is present by directing the spray into the posterior pharynx.

In order to check the secretions in cases of chronic rhinitis with excessive watery discharge the following spray may be used:

R.	Olei caryophylli	m. viii	50
	Terebeni	m. xx	1 33
	Liq. petrolati	℥i	30

M. Sig.: Use as a spray three or four times a day.

In the more acute forms of rhinitis the following:

R.	Acidi carbolici	gr. i	06
	Menthol	gr. i	06
	Olei gaultheriæ	m. i	06
	Liq. petrolati	℥i	30

M. Sig.: As a spray four or five times a day.

Yeo, in his *Clin. Ther.*, recommends the following combinations in the treatment of the different forms of bronchitis:

BRONCHORRHŒA AND FETID BRONCHITIS.

R.	Acidi carbol.	℥ss	7 50
	Tinct. opii camph.	℥iii	90

M. Sig.: A teaspoonful to be inhaled freely from half a pint of hot water; or:

R.	Acidi carbol.	m. viii	50
	Olei pini prunilionis	m. xx	1 33
	Aquæ q. s. ad	℥i	30

M. Sig.: To be diffused from the surface of water kept boiling.

The following is recommended by him as an antiseptic in fetid bronchitis:

R.	Thymol	℥i	3 75
	Acidi carbol.	℥ii	7 50
	Creosoti	℥ii	7 50
	Spts. chloroformi	℥i	30

M. Sig.: As an inhalation.

(To be continued.)

Nasal Ointment.

In crust formations upon the septum, and upon eroded surfaces which may have even gone so far as to produce perforation of the septum, the following ointment is of service:

R.	Zinci oxidi	gr. xl	2 66
	Acidi carbol.	gr. vi	40
	Olei rosæ	m. v	32
	Iodol	gr. xxv	1 66
	Lanolini	℥iv	15

M. Sig.: Apply locally to the affected parts.

Terpin Hydrate in Bronchitis.

The following combination containing terpin hydrate is recommended in troublesome coughs:

R.	Terpin hydratis	℥ss-℥i	2-3 75
	Glycerini	℥ii	7 50
	Alcoholis	℥v	18 75
	Elix. simplicis q. s. ad	℥iv	120

M. Sig.: One teaspoonful every three or four hours in water.

Antipyretics in Children.

McGee, in *Cleveland Med. Gaz.*, states that there is frequently no need of reducing fevers in children, but when he does use an antipyretic of this group his preference is for phenacetin. He gives one to three grains to a child two to five years of age. According to Hare antipyrin is safest, especially in treatment of the paroxysms of pertussis. It may be given in doses of two or three grains daily for each year of the child's age. Phenacetin, however, is more useful as a sedative in the treatment of influenza in children.

Treatment of Warts.

Dr. Courbin, as noted in *Pract. Druggist*, states that he has successfully used the following method in removing warts: The skin of the part is carefully disinfected; the base of the wart is transfixed by two needles (rendered aseptic) at right angles to each other. A piece of aseptic silk is then tied tightly around the base of the wart below the needles; the tightening of the ligature constricts the warts, forming a pedicle, and an antiseptic powder is dusted on. At the end of eight days the dressing is removed, when the warts, needles, and silk come away, leaving a small wound, which soon heals.

Treatment of Contagious Diseases of the Eye.

Ziegler, as stated in *Amer. Med.*, discusses the treatment of contagious diseases of the eye by the general practitioner. He states that the local treatment of acute catarrhal conjunctivitis consists of a single application of silver nitrate, grains 5 to the ounce, on the first day, followed by milder applications of glycerol of tannin or a 10 per cent. solution of protargol on each successive day. The following wash is of value:

R. Sodii biboratis	gr. v	30
Acidi borici	gr. x	66
Aquæ rosæ		
Aquæ destil. āā	ʒi	30

M. Sig.: Drop in each eye freely every two or three hours.

Granular conjunctivitis should be treated daily by an application of silver nitrate, from 5 to 10 grains to the ounce. When the disease begins to yield, milder applications, such as glycerol of tannin or boroglycerid (50 per cent. solution) should be substituted. Purulent ophthalmia should be treated by the daily application to the everted eyelids, of a 10-grain solution of silver nitrate, neutralized by a saturated solution of salt followed by an after irrigation of bichlorid wash. Ice compresses should be applied to the lids, and changed every minute until the swelling and discharge are markedly diminished. A 1 to 4000 bichlorid solution should be used as a wash every fifteen minutes for the first three or four days and then at longer intervals a 1 to 8000 solution may be used. Twice daily a solution of protargol (10 to 25 per cent.) should be instilled. As a prophylactic measure in ophthalmia neonatorum a single drop of a 10-grain solution of silver nitrate may be instilled, or the eyes may be irrigated with a 1 to 4000 bichlorid solution, or a solution of protargol 10 to 25 per cent. may be used.

As an Antiseptic Mouth Wash.

The following is recommended by *Merck's Report* as a mouth wash:

R. Formalin	m. v	3	75
Tinct. benzoini	ʒiii	11	25
Tinct. myrrhæ	ʒi	3	75
Olei menthæ pip.	m. iii		20
Olei anisi	m. ii		13
Olei cassiæ	m. i		06
Olei cinnamomi	xv	1	00
Alcoholis	ʒii	60	

M. Sig.: Use as mouth wash once or twice daily.

Medicolegal.

Fracture of Ankle Bone and Septic Pneumonia.—The Court of Appeals of New York says that the only serious question presented in the case of Seifert vs. the Brooklyn Heights Railroad Company was whether the guessing of medical experts, based upon inaccurate hypothetical questions, to the effect that a broken bone in the ankle, which did not perforate the skin, caused septic pneumonia four and one-half months afterwards, furnished sufficient support for a verdict of a jury awarding damages against the negligent party for the resulting death. Death from pneumonia, it says, is not ordinarily the necessary and natural result of an injury to the fibula bone, and when, as it was in this case, it is sought to establish, almost entirely by expert evidence, that such result actually followed, the connection between cause and effect should be made so clear that the conclusion can be said to be the reasonable result of the proof. In this case the proof fell far below that standard, and the verdict of the jury was left, the court declares, too largely upon conjecture and speculation, and so, it thinks, was not supported by evidence, wherefore the verdict should not be allowed to stand.

Sale of Drugs by Physician.—Section 2620 of the Kentucky statutes makes it a misdemeanor to sell or compound drugs, except for a registered pharmacist, or under his immediate supervision. Section 2632 provides, "Nothing in this act shall apply to, or in any manner interfere with the business of any licensed practicing physician, or prevent him from supplying to his patients such articles as may seem to him proper, or with his compounding his own prescriptions." It will be seen, the Court of Appeals of Kentucky says, in the case of Commonwealth vs. Hovious, that this section does not, simply in general terms, exempt physicians from the provisions of section 2620. The true meaning and intent of section 2632, in the court's opinion, is to allow a physician to compound or sell any kind of drugs to his own patients, but not to fill prescriptions sent to him by others. In other words, if a party applies to a physician for examination and treatment, the physician, the court holds, may furnish him any kind of drugs that in his judgment is proper, or compound for him any kind of drugs or medicine; but he can not sell drugs indiscriminately to persons calling for the same, nor compound drugs and sell them indiscriminately to all who may call for them. It results, it holds, that it was error to adjudge not guilty of violating section 2620 a regular licensed physician who carried on the business of a retail druggist in person and by an agent, without obtaining the certificate required by law of pharmacists.

Liability for Failure to Furnish Medical Assistance.—The Court of Civil Appeals of Texas says that, according to testimony in Galveston, Harrisburg & San Antonio Railway Company vs. Rubio, the company violated its contract in regard to furnishing the latter party, who had been in its employ, with necessary medical and hospital assistance. For such breach of contract the man, the court holds, would be entitled to recover to the extent of the damages he may have sustained, which might be expected as naturally resulting from such breach. In other words, the company would be responsible if it violated said provision of its contract to compensate him in reference to his immediate sickness, and the consequences thereof attributable to its failure to give him the necessary attention; and loss of time, and decreased capacity to earn a living, the court says, could not be regarded as too remote. But, as a matter of damages, his act in making his way back to his home, some 700 miles, on foot, was too remote to be considered, though occasioned by his having no money to pay his fare. It says that this act had no connection with the company's refusal to comply with its contract, as a natural result thereof, nor was it an act to be reasonably expected therefrom. The rule that, where there is serious physical injury occasioned by the act of another, mental suffering, if any, may also be considered as an element of damages, the court holds, had application in this case. It says that although the damages sought were for breach of contract, it will be observed that the very subject-matter of the contract was the health or physical condition of the employe. From a breach of it physical suffering and injuries would naturally follow. Hence, the applicability of the rule.

Louisiana Medical Practice Act Not Unconstitutional.—The title of Louisiana Act No. 49 of 1894 reads: "An act to regulate the practice of medicine, surgery and midwifery; to create state boards of medical examiners, and to regulate

the fees and emoluments thereof; to prevent the practice of medicine, surgery and midwifery by unauthorized persons; and to provide for the trial and punishment of violators of the provisions of this act by fine or imprisonment, or both; and to repeal all laws or parts of laws in conflict or inconsistent with this act." Section 12 provides "that any itinerant vender of any drug, nostrum, ointment or application of any kind, intended for the treatment of disease, or injury, or who may by writing, print, or other method, profess to cure or treat disease, or deformity, by any drug, nostrum, manipulation, or other expedient, in this state, shall, if found guilty, be fined in any sum, not less than $25, and not exceeding $100, for each offense, to be recovered in an action of debt before any court of competent jurisdiction, or shall be imprisoned for a term of not less than ten days or more than thirty days, or both fined and imprisoned." The Supreme Court of Louisiana holds, State vs. Lee, that the title expresses but one object, and that section 12 does not go beyond the title, by denouncing the mere selling of drugs and nostrums, etc., as an offense; the offense there denounced consisting of the itinerant vender professing to treat and cure disease and deformity by the use of drugs, nostrums, etc., sold by him, and by the other means mentioned. It says that it can hardly be denied that, if the general purpose of the act is to protect the public from unskilled and incompentent practitioners, provisions relating to venders who undertake to prescribe and effect cures with the nostrums which they sell are quite as germane to the purpose as the provisions which relate to persons who, without having had their qualifications tested, undertake to treat disease by the use of compounds sold by others. It does not think that the section was intended to apply to the itinerant vender, merely in his capacity of vender, but that, as above suggested, the lawmaker was undertaking to deal with him, for the purposes of the act, as a person professing to treat or cure disease or deformity by the use of drugs and nostrums which he sells, or by manipulation or other expedients. Nor, although the section is inartificially drawn, does the court consider that it can be interpreted as defining and denouncing two offenses: the one, of selling, and the other, of professing to cure with, drugs and nostrums. It ignores the disjunctive "or" after the word "injury."

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine (Philadelphia), February 1.

1 *On the Value to the Physician of Modern Methods of Diagnosis. Henry L. Elsner.
2 *Erysipelas in the Negro. Report of a Case of So-called Spontaneous Type; Summary of the Literature on the Subject. R. P. Stoope.
3 The Passing of Drug Giving. John Madden.
4 *The Comparative Value of the Thorner Stationary Ophthalmoscope. Howard F. Hansell.
5 *"The Vexed Question of Vaccination" Again: Have We a Standard Glycerinated Virus? F. J. Runyon.
6 A Durham Tube in the Right Bronchus. E. D. Ferguson.
7 *The Abandonment of Digital Examination by the Vagina in Labor. W. A. Briggs.

Medical News (N. Y.), February 1.

8 *On the Value to the Physician of Modern Methods of Diagnosis. Henry L. Elsner.
9 *Note on the Glycosuria Following Experimental Injections of Adrenalin. C. A. Herter and A. N. Richards.
10 *Sanitary Aspects of Nicaragua vs. Those of Panama. J. Edward Stubbert.
11 A Word on Specialization in Medicine and Surgery. Wm. M. Polk.

Boston Medical and Surgical Journal, January 30.

12 *On the Value to the Physician of Modern Methods of Diagnosis. Henry L. Elsner.
13 *Suggestion in Medicine. George C. Smith.
14 A Case of Raynaud's Disease. George S. C. Badger.
15 *Vaccination and Smallpox. S. H. Durgin.

Philadelphia Medical Journal, February 1.

16 *Results of X-Ray Diagnosis and of Operation in Injuries from Foreign Bodies in the Eye. William M. Sweet.
17 A New Localizer for Determining the Position of Foreign Bodies in the Eye by the Roentgen Rays. L. Webster Fox.
18 *Precancerous Keratosis Probably Due to X-Rays. James C. Johnston.
19 *Treatment of Epithelial Skin-cancers and Sycosis Non-parasitica with the X-Ray. J. F. Rinehart.
20 *The Accuracy of the Negative Roentgen Diagnosis in Case of Suspected Calculous Nephritis and Urethritis. Charles Lester Leonard.

New York Medical Journal, February 1.

21 *The Management of the Tendency of the Upper Fragment to Tilt Forward in Fractures of the Upper Third of the Femur. Russell A. Hibbs.
22 Meckel's Diverticulum and its Relation to Ileus, with Report of a Case. C. O. Thienhaus.
23 A Case of Hydrencephalocele. David E. Wheeler.
24 *The Influence of Electric Ozonation upon Disease. (Concluded.) G. Lenox Curtis.
25 The Treatment of Defectives. Maximilian P. E. Grossmann.
26 *Typhoid Perforation, Its Frequency, Prognosis, Diagnosis, and Treatment. Hugh M. Taylor.

Medical Record (N. Y.), February 1.

27 *Carbonate of Creosote in Pneumonia. W. H. Thomson.
28 *Ringworm: A Note on Its Treatment. George T. Jackson.
29 Progress in Veterinary Medicine in Its Relation to Public Health. William H. Lowe.
30 Case of Acute Articular Rheumatism with Pyemic Temperature, Treated by Anti-streptococcic Serum. R. J. Chipman.
31 Early Mechanical Effects of Altitude of the Rocky Mountain Plateau in Pulmonary Tuberculosis. J. E. Courtney.
32 Gunshot Wound of the Stomach. George P. Jessup.
33 Gallstones Complicated with Empyema of the Gall-bladder. H. T. Miller.
34 A Case of Galactorrhea. Frederic Griffith.
35 Circumcision for Relief of Acne. W. C. Ussery.
36 Protozoa in Gangrenous Stomatitis. W. Moser.

Cincinnati Lancet-Clinic, February 1.

37 Diarrhea. George J. Monroe.
38 *New Wearing Apparel and Hygiene. M. L. Heidingsfeld.

St. Louis Medical Review, February 1.

39 *Sympathetic Cectomy in Simple Optic Nerve Atrophy—A Clinical Report. Edwin C. Renaud.

Northwestern Lancet (Minneapolis), January 15.

40 The Stereoscopic Photograph. The Beneficial Effect on the Eyes from the Use of the Stereoscope. A. Edward Davis.
41 The Diagnosis of Extrauterine Pregnancy. J. E. Moore.
42 Hay Fever and Asthma a Permanent Cure by Means of Nasal Surgery. Floyd S. Muckey.

American Practitioner and News (Louisville, Ky.), Dec. 15, 1901.

43 Emotional or Impulsive Insanity. Ewing Marshall.
44 Facts Versus Fallacies in the Practice of Rectal Diseases. A. B. Cooke.
45 Typho-malarial Fever. William A. Howard.

Medical Fortnightly (St. Louis), January.

46 Locomotor Ataxia; with Observations in Nine Cases. Everett J. Brown.
47 A Case of Phlegmonous Erysipelas of the Arm Requiring Amputation at the Shoulder Joint. W. V. Loftus.

Virginia Medical Semi-Monthly (Richmond), January 24.

48 Repeal the Special License Tax—Report of Committee—Essentials for Success. J. Beverly Deshazo.
49 Intubation in Laryngeal Diphtheria with Special Reference to the Influence of Antitoxin. Walter A. Wells.
50 Sarcoma of the Testicle. Lewis C. Bosher.
51 The Crepitant Râle. E. M. Magruder.
52 Treatment of Purpura. John H. Claiborne.
53 Address of Welcome to the Seaboard Medical Association of Virginia and North Carolina. Livius Lankford.

American Journal of Obstetrics (N. Y.), January.

54 *The Surgical Aspects of Carcinoma Uteri Complicating Pregnancy, Labor, and the Puerperium. Charles G. Cumston.
55 Technique of Labor in Private Practice. Stanley P. Warren.
56 Developmental Anomalies of the Uterus. A. L. Stavely.
57 Uterus Didelphys Found with a Pyosalpinx. J. M. Ward.
58 *Intestinal Anastomosis with Suturing of the Entire Thickness of the Intestinal Wall. Oscar H. Allis and R. P. McReynolds.
59 Report of a Case of Primary Carcinoma of the Urethra. Abram Brothers.
60 Elephantiasis of Labium Majus—Fibroma of Labium Majus. Louis J. Ladinski.
61 *Vaginal Hysterectomy with Four and a Half Months' Pregnancy and Closed Cervix. J. H. Carstens.
62 General Treatment in Gynecological Patients. Walter B. Chase.
63 Pelvic Fracture During Labor. U. S. Bird.
64 Cases in Practice (Alveolar Hemorrhages During Pregnancy, etc.) Thomas C. Smith.
65 *Iodoform and Carbolic-acid Intoxication. I. S. Stone.
66 A Catheter. F. F. Simpson.

St. Paul Medical Journal, February 1.

67 Tubal Pregnancy. Its Etiology and Treatment, with Report of Cases. Judd Goodrich.
68 The Treatment of Typhoid Fever, with Special Reference to the Use of Water. G. W. Boot.
69 Insanity and the Poisons. J. D. MacLean.
70 Thermic Trauma. Edward O. Plumbe.
71 Report of Four Cases of Strangulated Hernia, Two of Them of a Rather Unusual Character. F. M. Archibald.

Alienist and Neurologist (St. Louis), January.

72 *The Acquirement of Nervous Health. F. Savary Pearce.
73 *Manual Stigmata of Degeneration. J. Elvin Courtney.
74 *Sexual Inversion Among Primitive Races. C. G. Seligmann.
75 Juvenile Female Delinquents. E. S. Talbot.
76 Clinical Observation on a New Hypnotic. H. Schoenfeld.

77 *Medical Aspects of the Czolgosz Case. Charles H. Hughes.
78 *Leon F. Czolgosz. August Drahms.
79 *Consciousness and the Neural Structure—a Physio-psychical Review. James G. Kiernan.
80 *Science and "Christian Science." Paul Paquin.

Dominion Medical Monthly (Toronto), January.

81 Tuberculosis of the Skin. Graham Chambers.
82 Report of Physician-in-Charge Muskoka Cottage Sanatorium. J. H. Elliott.

Annals of Gynecology and Pediatry (Boston), January.

83 *Treatment of Inversion of Uterus. E. W. Cushing.
84 *Grave Abdominal Injuries without External Evidences of Traumatism. R. Harvey Reed.
85 Diffuse Sarcoma of the Uterus. D. S. Fairchild.

Chicago Medical Recorder, January 15.

86 *The Conservative Treatment of Appendicitis and Fallacy of the Starvation Cure. J. H. Carstens.
87 Fatal False Passage in Hypertrophy of the Prostate—Pelvic Abscess and Embolism of the Pulmonary Artery. Maximilian Herzog.
88 *Indications and Limitations of Massage of the Prostate Gland. Louis E. Schmidt.
89 Case of Brain Abscess. J. Holinger.
90 Infant Incubation, with the Presentation of a New Incubator and a Description of the System at the Chicago Lying-in Hospital. Joseph B. De Lee.
91 The Diagnosis of Latent Frontal Sinusitis. G. E. Shambaugh.
92 Syphilis Hereditaria Tardia. Emanuel Friend.
93 Familiar Cases of Goitre. Wm. L. Ballenger.
94 Case of Aortic Aneurysm. Robert B. Preble.

Pennsylvania Medical Journal (Pittsburg), January.

95 Address in Hygiene, Western University of Pennsylvania. Elmer B. Borland.
96 *Observations on the Nature and Diagnosis of Acute or Infective Endocarditis. Aloysius O. J. Kelly.
97 Diagnosis and Treatment of Gastroptosis. J. Dutton Steele.
98 Thyroiditis Complicating Typhoid Fever. Wm. Egbert Robertson.
99 Some Practical Points in the Treatment of Typhoid Fever. S. Birdsall.
100 *Reforms in Medical Education. H. M. Shallenberger.
101 *The Appendix Vermiformis. Edmund W. Holmes.
102 Strength. John M. Batten.

Medical Bulletin (Philadelphia), January.

103 Acute Gonorrhea. John V. Shoemaker.
104 One Thousand Ophthalmic Operations. L. Webster Fox.

Detroit Medical Journal, January.

105 A Case of Landry's Paralysis, with Notes. Johann Flintermann.
106 The Curability of Deafness. Harold Wilson.
107 Clinical Data Relative to Inebriety. Samuel Bell.
108 Galvanism and Diabetes. F. C. Thompson.
109 Myxedema—A Casuistic Contribution from the Detroit Sanitarium. Max Ballin.

Kansas City Medical Index-Lancet, January.

110 *Scientific Research—The Indispensable Basis of All Medical and Manifold Progress. (Continued.) George B. Ferguson.
111 *Epilepsy, Responsibility and the Czolgosz Case. J. Sanderson Christison.
112 Treatment of Malignant Growths by X-Ray, with Report of Two Cases. Samuel Ayers.
113 Reminiscences of a Recent Trip Abroad, Including Visits to the London, Paris, Berlin, etc., Hospitals, Clinics, Medical Museums and Libraries, as Well as to the British Medical Association. John Punton.

Ophthalmic Record (Chicago), January.

114 *The Mydriatics: The Motive and Method for Their Employment in the Correction of Errors of Refraction. S. D. Risley.
115 *A Further Contribution to the Study of the New Formed or Vicarious Fovea. A. Edward Davis.
116 *The Difficulties in the Way of an Accurate and Satisfactory Fitting of Glasses in Ametropia. Swan M. Burnett.
117 The Centering and Decentering of Lenses Before the Eye. Edward Jackson.
118 *Climate or Spectacles? Geo. S. Hull.
119 The Practical Value of the Perforated Disc in Subjective Testing of the Refraction. F. B. Eaton.
120 A New Enucleation Forceps. George F. Suker.

Medical Sentinel (Portland, Ore.), January.

121 *Pulmonary Tuberculosis—The Relative Parts Played by Heredity and Infection—Should the Disease be a Notifiable One? Harry Lane.
122 The Prevention of Uterine Displacements with Adhesions with a Special Reference to Parturition as a Causative Factor. James P. Tamiesie.
123 The Psychopathic Hospital—An Urgent Necessity. Ernest Hall.

The Laryngoscope (St. Louis), December, 1901.

124 *The Early Appearance of Laryngeal Tuberculosis. H. Holbrook Curtis.
125 Report of a Case of Sarcoma of the Right Tonsil. Burton S. Booth.
126 Head Sections Showing the Relation Existing between the Nose and Its Accessory Cavities. John W. Murphy.
127 *Tinnitus Aurium. Philip D. Kerrison.
128 The Nose and Throat in the History of Medicine. (Continued.) Jonathan Wright.
129 The Attic of the Nose. Edwin Pynchon.

Journal of Eye, Ear, Nose and Throat Diseases (Baltimore), November-December, 1901.

130 The Rod Optometer—A Valuable Aid in Determining Errors of Refraction. Francis M. Chisolm.

Western Medical Review (Lincoln, Neb.), January 15.

131 *Internal Derangement of the Knee-joint. Charles C. Allison.
132 *The Relation between Dental Affections and Those of the Eye. George H. Bicknell.
133 Cancer of the Uterus. W. O. Henry.
134 Further Observations on Intraspinal Injection. Frederick Rustin.
135 *Some Local Uses of Formalin. A. B. Anderson.
136 Some Remarks on Infections. H. P. Hamilton.
137 Inflammation of the Sigmoid and Colon. R. D. Mason.
138 Office Treatment of Gynecological Patients. Ewing Brown.
139 *The Bromid of Strontium. W. H. Dearing.
140 Alimentary Glycosuria. A. C. Stokes.

Medical and Surgical Monitor (Indianapolis), January 15.

141 Complications and Sequelæ of Typhoid Fever. E. L. Larkins.
142 Unsuccessful Operations for Appendicitis—A Plea for Operations in Hopeless Cases. Walker Schell.
143 A Study in the Evolution and Psychology of Sex. N. E. Aronstam.

Medical Herald (St. Joseph, Mo.), January.

144 *The Unreliability of Children's Testimony. Elmore S. Pettyjohn.
145 Scarlet Fever. H. D. Jerowitz.
146 Some Twentieth Century Ideas in Medicine. Charles E. Davis.

Southern California Practitioner (Los Angeles), January.

147 Observations in Johns Hopkins. F. R. Burnham.
148 Achylia Gastrica. W. Jarvis Barlow.
149 Hernia—Indications for Operation. C. Van Zwalenberg.
150 Recent Advance in Clinical Symptomatology in Relation to Abdominal Surgery. W. M. Hitchcock.
151 How I Treat Membranous Croup. A. A. Stafford.

Alabama Medical Journal (Birmingham), January.

152 *The Future of the Negro from the Standpoint of the Southern Physician. Beale Harris.
153 Pathology Necessitates a Consideration of Bacteriology. L. N. Johnston.
154 *Chronic Nasopharyngeal Bursitis (Tornwaldt's Disease). Dunbar Roy.
155 Suppression of Consumption. R. C. Bankston.

Memphis Medical Monthly, January.

156 Growth and Development of Modern Surgery. J. P. Runyan.
157 A Supplementary Report upon the Subject of Gallstones, Cholecystitis and Cholangitis. Frank D. Smythe.
158 Report of Two Cases of Ovarian Cyst. Robert W. Tate.
159 *Febris Innominata. J. H. Preston.
160 Surgery of the Brain and the Appendix, with Report of Cases. E. M. Holder.

Canadian Practitioner and Review (Toronto), January.

161 A New Method of Cutting Urinary Calculi; A Case of Unusually Large Calculus Removed by Suprapubic Section. George A. Peters.
162 Cancer of Rectum. Edmund E. King.
163 Pelvic Lesions in Relation to Their Distinctive Effects upon Mental Disturbances. A. T. Hobbs.

Archives of Pediatrics (N. Y.), January.

164 *A Case of Acute Hemorrhagic Nephritis Complicating Influenza in an Infant of Thirteen Months, with an Analysis of 40 Cases of Influenzal Nephritis. D. J. Milton Miller.
165 Amaurotic Family Idiocy. A. C. Cotton.
166 High Temperature of Three Months' Duration, with Double Sacculated Empyema, Situated on One Side of the Diaphragmatic Surface of the Lung. L. Emmett Holt.
167 Sun Play-Rooms on City Roofs. W. P. Northrup.
168 *The Malnutrition of Tuberculosis. Floyd M. Crandall.
169 A Case of Acute Articular Rheumatism in an Infant Twenty-seven Days Old. Paul J. Barcus.

Texas Medical News (Austin), January.

170 Report of a Case of Large Multilocular Cyst—Adenoma of the Ovary—Operation—Recovery. Thomas F. Kittrell.
171 Malarial Hematuria—Black Jaundice. M. M. Myers.
172 Acute Appendicitis and Its Management. Charles C. Gidney.
173 Acute Rheumatism. J. W. Torbett.

Chicago Clinic, January.

174 The Treatment of Diphtheria. Dudley Jackson.
175 *Report of Case of Idiopathic Dropsy. Emma M. Moore.

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1. **Modern Methods of Diagnosis.**—Elsner's address covers the subject of the modern improvements in diagnosis which are becoming so numerous and important in medical practice. Of course, not all the newer methods are referred to. He says the individual has the right to demand of his physician, after recording all facts relating to the disease, the investigation of every detail of his case by every method needed for accurate observation and ultimate diagnosis.

2. **Erysipelas in the Negro.**—The rarity of erysipelas in the negro in the literature of the disease suggested to Stoops the report of a case of spontaneous erysipelas in a coal-black

negro woman with typical symptoms and course, with streptococci in the blebs. He briefly reviews cases reported in the literature and offers as his conclusions the following: 1. The negro possesses no special immunity against erysipelas. The impression that he is immune is due to the following causes: *a*. The average physician does not have an extensive practice among the negroes. *b*. In the North, negroes frequently have a superstitious dread of a hospital, and hence do not always apply for treatment. *c*. The physicians who have had such cases have not, as a rule, reported them. *d*. The disease is sometimes unrecognized when it does occur. 2. As interpreted by the course the disease took in my case, the picture of facial erysipelas in a negro is the following: *a*. The onset is attended with enlargement of the cervical glands, sore throat and high fever. The swelling generally begins around the nose or mouth. *b*. No cutaneous flush is visible in a very dark negro. *c*. Hardened projections can be felt at the periphery of the inflamed area. *d*. The blebs, which occurred early in my case, are very distinct, showing as whitish patches in sharp contrast with the dark skin. *e*. Desquamation begins in a part as soon as the inflammation has subsided, and may be complete in one place while the erysipelatous process is active in another. *f*. The general symptoms are those that accompany most of the acute fevers.

4. **The Stationary Ophthalmoscope.**—Hansell illustrates the Thorner stationary ophthalmoscope and shows its use for fundus examination. It can not, of course, replace the hand ophthalmoscope for various reasons, viz.: its size, non-portability, inferiority in the study of lens and vitreous opacity and its indifferent measurement of the state of refraction of the eye, but it is specially valuable in the examination of the fundus and in the teaching and sketching or painting diseased or healthy eye grounds and in diagnosis.

5. **Vaccination.**—Runyon gives a very unfavorable opinion of the use of the glycerinated vaccine, maintaining that there are several possible reasons why it should be more likely to be followed by tetanic infection. He enumerates these as follows: 1. In making the glycerinated virus, parts of the vesicle are used, which were formerly considered unsafe. 2. The germs of tetanus being anaërobic and very resistant to ordinary germicides, possibly find suitable media in the liquid virus (for, so far as I have been able to learn, tetanus when it occurred has almost invariably followed the use of this virus). The incubation period seems to exclude this. 3. Glycerinated lymph is slow in drying, and may thus become contaminated by germs floating in the air, from clothing, etc. 4. This is a point to which I call special attention. The germs of tetanus almost invariably require the assistance of other germs to prepare the soil, else they will not develop (Dercum-Keating's Cyclopedia-Supplement). May not the slough (superficial gangrene, for such it is) not infrequently following the use of certain types of the glycerinated lymph, supply the ideal soil? Then the tetanus germs develop, if present in the vaccine, or otherwise reaching the wound. He reiterates his view that he thinks it is a dangerous virus for general use and one calculated to bring discredit upon vaccination generally, a statement which he made in August and claims that it was a prophecy that has been fulfilled.

7. **Digital Examination in Labor.**—Briggs recommends the use of rectal instead of vaginal examination in labor and claims that equally satisfactory results have been obtained as to presentation, etc., as by the other method, without the risk of introducing germs or interfering with the natural secretions.

8. —See ¶1 above.

9. **Adrenalin.**—Herter and Richards have found that adrenalin solution injected into the peritoneal cavity of a normal dog causes a rapid and usually considerable excretion of dextrose in the urine, an observation not heretofore made. The details of the experiments are reported and attention called to special points. In one case an effort was made to greatly reduce the carbohydrate material by means of injections of phloridzin, together with deprivation of food. It is noticeable that urine collected four hours after the injection did not contain any sugar, though later glucose appeared in small amounts. Another feature of interest is that abundant excretion of glucose followed the injection of adrenalin solution when it had been boiled for five minutes, which process must have destroyed any diastatic ferment contained in the extract. In fact Takamine's method of preparing adrenalin makes unlikely the leaving of any diastatic ferment in the product. It also can be added to the solution of glycogen and kept in an incubator for twenty-four hours without conversion of glycogen into sugar. From these facts they hold that there is no reason for attributing the glycosuria from adrenalin to the presence of a diastatic ferment. There is also no satisfactory reason for referring to the diastatic ferment in the suprarenal body the glycosuria caused by an extract of this gland. The dogs which received the adrenalin subcutaneously showed only slight increase in the reducing substance of the urine, which contrasted sharply with doses of equal size given intraperitoneally. The alterations in the intestines and pancreas in one experiment are remarkable and indicate that the agent is capable of producing highly destructive changes of the parts. After a fatal dose of adrenalin the cells composing the islands of Langerhans were found to be the seat of granular degeneration, very pronounced in some places. The nuclei of many of these cells showed extensive loss of chromatin substance. In some parts of the pancreas the cells of the islands of Langerhans were much more injured than the surrounding cells of the secreting acini. The authors promise to investigate these results more fully. They suggest, however, that this glycosuria is in reality of pancreatic origin, though such advanced pancreatic lesions are not essential to its production.

10. **Isthmus Canals.**—Stubbert reviews and criticises the paper of Soper published in the *Medical News* of January 4, calling attention to the different sanitary conditions along the Panama and Nicaragua routes. While the Panama route is undoubtedly deadly he gives numerous facts to show that the Nicaragua route is comparatively a healthy one.

12.—See ¶1 above.

13. **Suggestion in Medicine.**—The importance of suggestion is illustrated by numerous instances by Smith, who calls attention to the danger of evil results from careless remarks of physicians or from the lack of sufficient instruction. He thinks that the fact of human suggestibility necessitates in the physician more thorough study of human nature and psychology. We should make our examination more exhaustive and sharpen our observation with the result of producing better diagnosis, prognosis and treatment. The two points which he specially wishes to emphasize are the need of thorough psychologic preparation for the medical school and the dangers of bad suggestive therapeutics.

15. **Vaccination.**—The importance of vaccination and revaccination is insisted upon by Durgin, who makes, however, an interesting statement in regard to the Mexican practice of using only humanized lymph and never revaccinating with excellent results as regards prophylaxis from smallpox. He thinks only slight abrasions, perhaps not over 1/8 to 1/4 of an inch in diameter, are required and the skin should be only reddened; drawing blood is useless.

16. **X-Ray Diagnosis of Foreign Bodies in the Eye.**—Sweet discusses the value of *x*-ray diagnosis, its accuracy, etc., from a study of some 65 cases in which the foreign body was shown on examination out of a total of 102 cases examined and offers the following conclusions: "1. The Röntgen rays offer the most certain method of detecting and locating foreign bodies in the eye. 2. The position of the foreign body should be determined in all cases before magnet extraction is attempted. Frequent insertion of the small magnet into the vitreous in the hope of finding the metal injures the eye and renders later attempts at extraction difficult, while the employment of the large magnet is not without danger when the position of the body is not known. 3. Early extraction offers the best chance of saving the eye. When the track of the body is through the cornea and lens, its position in the vitreous will indicate whether less damage will be done by removing the metal through the open entrance wound or through a new opening in

the sclera close to the indicated position of the body. 4. The more extended use in the future of the larger magnet in cases of steel in the vitreous chamber to draw the metal to an opening in the sclera, after its position has been accurately determined, will probably achieve better visual results than have been obtained in the past with the small magnet introduced in the vitreous. 5. Iron or steel which has remained in the eyeball until a fibro-cellular covering envelops it can not be dislodged with the magnet. Extraction with forceps, and the employment of normal salt solution to replace any vitreous lost, has resulted in several instances in eyeballs of good cosmetic appearance, and is an operation worthy of trial. Forceps extraction must also be employed when the body is of copper or glass. 6. Extraction is a safe operation, and under proper precautions is free from the dangers of panopththalmitis or meningitis." A tabulated summary of the cases is given.

18. **X-Ray Precancerous Keratosis.**—The conditions described by Johnston differ decidedly from *x*-ray burns, and must be classed, he thinks, as precancerous keratosis. Two cases are reported showing the conditions. There was no tissue lost, but the skin of the exposed part became red, thickened, and hard as in scleroderma, with excruciating boring pains. He thinks it is out of the question to leave these cornifications, as they are potentially malignant. He would excise them thoroughly and repair by grafting. Both cases were in *x*-ray workers, one a surgeon, and the possibility of irritation from developing and toning liquids is suggested, but Johnston remarks that he has examined the hands of a number of photographers and seen nothing approaching to this condition.

19. **X-Ray Treatment of Skin Cancer and Sycosis.**—The paper of Rinehart is written with special reference to the recognition of the *x*-ray in the treatment of skin cancer and non-parasitical sycosis. There is no pain in the treatment, little scar left and the possibility of more thorough eradication of the disease. He thinks that there must be more than the inflammation produced by the light and suggests the possibility of something in the nature of electrolysis destroying the cancer cells and the hair follicles.

20. **X-Ray and Calculous Nephritis.**—Of 206 cases examined on account of the suspicion of calculus, Leonard detected calculus in 65. Contrary to previous opinion the ureteral calculi were more frequent than the renal, which shows the greater accuracy of the method. In only one case in which a negative diagnosis was rendered was calculus found on operation and this mistake was due to defective technique in placing the plate, the shadow of the calculus being cast outside it. In three other cases of negative diagnosis the patient subsequently passed small calculi, the error being made in reading the negative. The percentage of error so far in the negative diagnosis has been less than 2 per cent. The results compare favorably with other methods of diagnosis and it should be noted that the calculi overlooked were all so small that they subsequently passed. There is no inconvenience to the patient to speak of, or pain, or any danger of infection by the introduction of instruments and yet the results of examination are more comprehensive than those obtained by any other method. Another advantage is the rational treatment of the patient by purely medical, dietetic and hygienic methods when the absence of calculi is determined by this means, and the value of the positive diagnosis is shown by the accuracy and completeness of the results of operation.

21. **Fractures of the Femur.**—Hibbs recommends the long traction hip splint, such as is in use in hip-joint disease, as the best treatment for fractures of the upper third of the femur. He illustrates the method of its employment and reports a case. He has since treated two other cases with similar splints with like satisfactory results. With this instrument the tendency of the upper fragment to tilt forward in fractures of the upper third of the femur ceases to be difficult to manage, and the treatment should be as successful as when the fracture occurs at a point lower down.

24. **Electric Ozonation.**—In the conclusion of his paper Curtis recommends electric ozonation to the consideration of the profession for the following reasons: 1. The device is not complicated and the cost of the apparatus is not prohibitive, and its maintenance amounts to practically nothing. A nurse can be easily taught to operate the machine. 2. The high tension and the low amperage of the current eliminate all danger from the shock. 3. The high-tension current and the great quantities of ozone liberated are productive of rapid therapeutic results. 4. The efficiency of the machine is not impaired by damp weather, and it is, therefore, always ready for use. 5. The machine is portable and well adapted for use in the sick-room. 6. It generates pure ozone and for that reason it is superior to any oxygen apparatus. 7. Chronic and acute cases are alike amenable to the curative effect of electric ozonation. 8. This appliance is a valuable diagnostic aid.

26.—This article has appeared elsewhere. See THE JOURNAL of January 25, ¶147, p. 281.

27. **Creosotal.**—Experience with 18 cases treated in the Roosevelt Hospital from May 1 to November 1, 1901, almost exclusively with creosotal is reported by Thomson. Of these only one died. The cases averaged fairly as the average run of pneumonia cases, and two or three were decidedly severe. In the one fatal case the drug seems to have been ineffectual, for reasons which he does not explain. He thinks it is quite possible that this drug may exert a special effect on the course of pneumonia. It also seemed to effect very favorably the undesirable complication of tympanites. He has never noticed any depressing effect of it on the circulation, nor need there be any fear of its acting injuriously upon the kidneys, even if they were previously diseased. His success in these 18 cases is considerably above the average as regards the slight mortality. His usual formula for administering it is:

℞. Creosot. carbonat.....3iv
Glycerini.....3j
Aq. menthæ.....ad Oss
M. Dose: Tablespoonful in water.

28. **Ringworm.**—Goose grease is the special treatment for ringworm recommended by Jackson. He says if we add a dram or more of the crystals of iodin to the ounce we will have a most effective treatment for ringworm. At the Vanderbilt Clinic at New York, this preparation has been extensively used for two or three years and almost exclusively after a few months' treatment. It should be applied twice daily until it has produced a reaction, as is shown by swelling of the patch, and then once a day is sufficient. In two or three weeks the hair falls out and the spot becomes bald, and when it grows again the patch is well. No epilation is necessary. There may be a little pain with the first application, but later even a child does not complain. He cautions, however, to use the genuine article, as there are some imitations on the market.

38. **New Wearing Apparel and Hygiene.**—Heidingsfeld calls attention to the effect of the use of new clothing which is made in sweat shops and used without previous washing and ironing. Frequently it has been stored away in some damp place under conditions favoring the development of the growth of any pathogenic germs that might exist. He reports several cases that have been observed and says he has often been called in to see members of clothing firms and employes who show marked evidences of herpes tonsurans acquired no doubt by handling finished products from so-called sweat shops. The laity should be disabused from the belief that everything new is clean and led to believe that everything new, if possible, should be washed and ironed. In this way we might eliminate many distressing forms of skin infection.

39. **Sympatheticectomy.**—Renaud finds this operation of value in obtaining the vaso-dilating effect required in the treatment of optic nerve atrophy and he reports cases where he has performed the operation with benefit. He thinks it of value only in cases where atrophy is beginning or is incomplete and before too pronounced structural changes have taken place. There must be considerable normal nerve tissue remaining. It is only necessary that the superior ganglion of the cervical sympathetic be removed, as it is from this ganglion alone that the sympathetic fibers to the eye and orbit are derived. He would also recommend its being removed on both sides and sug-

gests that the lack of success in glaucoma may sometimes be due to unilateral operation.

54. **Carcinoma Uteri in Pregnancy.**—The literature of the treatment of carcinoma complicating pregnancy is reviewed by Cumston, who sums up his conclusions as follows: If the carcinoma can be radically removed the life of the mother alone is to be considered. Up to the beginning of the sixth month of pregnancy vaginal hysterectomy is the operation of choice, but after this period abdominal hysterectomy, or Duehrssen's vaginal Cesarean section followed by hysterectomy is indicated. If the neoplasm is inoperable the life of the child must be considered, but if the progress of the growth is such that the mother becomes rapidly cachectic, thus compromising the fetal vitality, pregnancy should be interrupted. Palliative treatment alone should be instituted, because partial operations on the neoplasms usually produce hemorrhage, and do not materially benefit the mother. Cesarean section at term may be done, but leaving the uterus involves the danger of septicemia, consequently Porro's operation should be chosen if the periuterine tissues are not so infiltrated as to render it dangerous.

58. **Intestinal Anastomosis.**—Allis' first operation here described was resorted to because of the lack of the Murphy button, which he formerly used. It was an end-to-end anastomosis, and he remarks that if the reader will divest himself of his coat and place the cuffs parallel he can look down into the sleeve ends as into a double-barrelled shotgun. The inner surfaces of the sleeves correspond to the mucous surfaces. Now if the two proximal edges of the coat are sewed together by a suture that passes entirely through them, fully one-half their circumference can be utilized. If now you will turn in the remaining portion you will find you can readily complete the circuit by sewing the outer surfaces. In this way he successfully approximated the intestines in the case. The fact that the mucous membrane can be safely included in a suture emboldened him to repeat the operation, and finding by experience that his fingers could not always accomplish the purpose he has added to his case two instruments that he has found very convenient, not only as special aids in anastomosis, but also in general surgical work. One of these he calls the tenaculum forceps, which he uses very much as women use pins and basting thread to secure their work temporarily. It does not matter what stitch is used; all that is essential is that the approximated bowels should be securely united. Having firmly approximated one-half the circumference, he removes the forceps, and, turning the partly united sutures half around he seizes the same with the tenaculum forceps, and with a pair basting the work a little further on, the through-and-through suture can be continued almost entirely around the entire circumference. When near the ends of the approximation he finds the tooth forceps with serrations on the edge, convenient for turning in the mucous edges adjusting the serous, and holding them approximated until sutured. In the sewing of the serous surfaces any suture that is convenient will answer the purpose. The rule that only the serous coat must be pierced is no longer entertained, and the operator will act wisely if he penetrates the thickness of the intestinal wall. Whatever suture he employs, if he makes them fairly near together he finds they will be buried as he tightens them. In this way every possible intestinal anastomosis can be accomplished. He illustrates his paper with schematic drawings of the different stages of the operation as well as further theorizing the gastro-intestinal anastomosis performed in the same manner. Three cases are reported by Dr. McReynolds in which Allis' method was employed with success.

61.—See abstract in THE JOURNAL, xxxvii, p. 858.

65. **Iodoform and Carbolic Acid Intoxication.**—Stone has noticed that certain patients have a peculiar susceptibility to these substances and that their use is not without danger. He believes that iodoform can be dispensed with in most cases, at least by obstetricians, gynecologists, and abdominal surgeons to advantage. He notices the bad effects that sometimes occur in apparently producing visceral troubles, such as nephritis, adhesions, etc., as indicated by experiments on animals. He calls attention in conclusion to a peculiar effect of carbolic acid taken internally, namely, the rapid overcoming of the patient by the drug so that the effect is much like that produced by some cerebral or cerebrospinal intoxicant. It is certain that its action is not merely that of a caustic, having a local effect only. In the two cases where it was used this effect was marked, and he believes that the rapid absorption of the drug from the rough surfaces of the endometrium has the same effect as that produced by its internal administration.

72.—See abstract in THE JOURNAL, xxxvii, p. 934.

73. **Manual Stigmata of the Hand.**—The special features to which Courtney calls attention are stub-thumb or abbreviation and clubbing of the phalanx of the thumb, shortening of the little finger, and infantile nails. These he thinks are often found in persons of neurotic temperament liable to hysteria, hypochondria and to become the victims of morphin or alcohol.

44. **Sexual Inversion.**—Seligmann's article gives some interesting observations of the modes and habits of certain native races, more especially those of New Guinea and Borneo.

77. **The Czolgosz Case.**—See editorial, January 25, p. 252.

78. **The Czolgosz Case.**—Drahms discusses the peculiarities of Czolgosz and points out what he thinks are stigmata indicating degeneracy. He prophesies that at the postmortem will be found unduly thickened cranium, excess of Wormian bones and possibly imperfectly closed sutures, a pyramidal skull, light brain with few and shallow convolutions and the existence of confluent fissures.

79. **Consciousness.**—Kiernan criticises Barker for ignoring the former articles of Hammond which advocated the co-existence of consciousness throughout the whole extent of the nervous system.

80. **Eddyism.**—Paquin reviews some of Mrs. Eddy's statements, showing her up in quite an interesting way. He believes that christian science advocates immorality and crime by teaching that sin does not exist and directly threatens public welfare.

83. **Inversion of the Uterus.**—Cushing believes that the Thomas operation of laparotomy and dilating the funnel is, with the Trendelenburg position, the operation of choice in old cases of uterine inversion. It is here safer, surer and more surgically satisfactory than any other operation.

84.—See abstract in THE JOURNAL of January 11, p. 125.

88. **Prostatic Massage.**—This procedure is adaptable, according to Schmidt, in 1: Where we are treating inflammatory infarctions or congestions, where massage should be applied to hasten this absorption by stimulating the circulation. 2. In cases where it is desired to express out the fluid contents, especially in pathologic cavities. 3. Where endeavor is made to produce normal development of the undeveloped prostatic sphincter. 4. In cases of impotence, due to loss of the prostatic function where infection has not occurred, but exhaustion has set in, following excesses. In general neuroses of the prostate it is necessary to be cautious in the application of massage. The organ is exceedingly sensitive and the condition of the patient frequently changes for the worse. The technique is specially mentioned. All unnecessary pain on the introduction of the oiled finger should be avoided, and gentleness in all particulars should be the rule. The patient must be either in the knee-chest position or a standing one. The author does not believe in the frequent necessity of apparatus for the elongation of the finger as the loss of a tactile guide is objectionable. Nevertheless in certain cases it may be of use.

96.—See abstract in THE JOURNAL, xxxvii, p. 995.

100.—Ibid., p. 996.

101.—Ibid., p. 997.

110.—Ibid., p. 327.

111. **The Czolgosz Case.**—Christison's article reviews the subject of epilepsy, maintaining that epilepsy is lunacy pro tem and applies his views to the assassin Czolgosz, claiming that the facts indicate that Czolgosz was a case of the borderland lunatic type.

114. **Mydriatics.**—The design of Risley's article is primarily to discuss the motive for the employment of mydriatics and to

give instances to show the necessity for their use in a very large percentage of cases of asthenopia. He thinks that the opinion that it is not necessary to use these drugs in every case requiring glasses is in accord with the general impression, but that they are required in many cases for their satisfactory and successful treatment is also the experience with the majority of his colleagues. He reports cases of asthenopia and remarks that in cases where there are no fundus changes or morbid anomalies of binocular vision homatropin and duboisin may be and often should be employed. But in cases such as some of the examples given the longer duration of the cycloplegic is an important therapeutic factor, not to mention the greater anesthetic action of atropin and hyoscyamin as compared for example to duboisin.

115. **Vicarious Fovea.**—Two cases of operated strabismus are reported by Davis which indicate to him that in some cases at least the new formed macula has not only the same acuity of vision as the normal macula, but also, like it when stimulated, assists in the most perfect associated ocular movements.

116. **Fitting of Glasses.**—Burnett notices the methods employed for the additional examination of ametropia, and remarks that even when we have used all the data the ophthalmoscope, ophthalmometer, and the shadow test have furnished our real trouble seems often to have only begun. The personal equation of the patient as well as of the observer must be considered. In the eye we are not dealing with an optical instrument only, but a sense organ in which judgment must give expression to the impression received. Then we have the erratic action of accommodation to deal with and the irregular refraction outside the visual zone in the area hitherto covered by the iris. He has found that the difference between the refraction at the nasal and temporal sides of the cornea amounted in some instances to 3 or 4 D. There is nothing left but a patient and painstaking work with the trial case, having in mind always an ideal refractive condition based upon the knowledge obtained by all the objective methods of examination, to which we should endeavor to attain through the sense of the patient. In this time is a most important factor. A number of seances are often required, and then it may be necessary to order glasses for a period of experimentation which can be obtained in no other way. Of the various means that have been devised all are useful, but the great demand is for tact in handling people, quickness in seizing suggestions, and infinite forbearance and untiring patience on the part of the examiner. He is most successful with his refraction cases who possesses these qualities in the highest degree.

118. **Climate or Spectacles?**—Among the various individuals who seek relief in Southern California there are not a few nervous wrecks who find little relief until they have fallen into the hands of the oculist. Hull would suggest to every physician who advises patients to try that climate to ask them whether they have had their eyes examined by a competent oculist. Some would not come, they would find spectacles cheaper. He reports several cases illustrating his views. He thinks it would also be well to examine the eyes of every person having consumption and kindred exhaustive conditions, with the view of correcting any error of refraction, or heterophoria, which could cause reflex trouble.

121. **Tuberculosis.**—Lane has reviewed the health statistics and discusses the relative rôles of heredity and infection in this disease. He agrees with modern opinion that the disease is not usually transmitted directly, but hereditary predisposition offers a favorable soil for its development. He believes that the disease should be a notifiable one, but that we should not consider the consumptive who takes care of himself as a dangerous individual or at all objectionable to immediately associate with. We should avoid exaggerating the contagious nature of tuberculosis and adding unnecessary hardships to the consumptive's lot.

124. **Laryngeal Tuberculosis.**—Curtis describes the principal features of laryngeal tuberculosis and discusses the question as to whether it is primary or secondary, concluding that the former type has been pretty well disposed of for lack of clinical evidence. It has been his experience that autoinfection of the larynx occurs in recently-infected cases, possibly before the toxins have rendered the larynx less prone to autoinfection by the bacilli in the sputum. That the pharyngeal lymphatic ring may be the seat of the disorder and culture ground is abundantly proven. He remarks that in several of his own cases the early symptoms were obscure. The physical signs were lacking except that the vocal cords were sluggish in response to vibratory movement and the morning temperature of the patient was below normal. He calls attention to the fact that the pulmonary signs may be negative and only a slight afternoon temperature exist. We must watch carefully for the sub-mucous yellowish-gray spots which sooner or later appear beneath the translucent membranes in the laryngeal region and the aryepiglottic folds. In the early diagnosed cases we must prevent the results by local treatment, such as the injection of guaiacol and carbolic acid into the tissues. A simple persistent congestion of one cord with a slightly swollen appearance is another indication of the possibility of early tuberculous infection. He ends by remarking on the importance of studying these initial evidences while a possibility of averting the disease still exists.

127. **Tinnitus Aurium.**—The following is Kerrison's recapitulation: "In our search for the cause, we have the following sources of information to draw from: 1. Evidences of disease in any portion of the conducting apparatus as shown by physical examination. 2. History of the case, and character of the sound, as described by the patient. 3. Results elicited by careful functional examination. 4. Evidences of disease in other parts of the body, particularly as to the presence of digestive disorders, circulatory disturbances, blood dyscrasias or disease of the nervous system. 5. Effect of certain drugs, either in relieving or aggravating the tinnitus. The importance of a careful physical examination of the ear becomes evident from the fact that any appreciable lesion in any portion of the conducting apparatus must act at least as a contributing cause in the production of tinnitus, whatever the character of the sound and whatever the chief factor in its causation may be. From the patient is learned the character of the noise—whether unilateral or bilateral, simple or elaborated, constant or intermittent, pulsating or uniform, of high or low pitch. The importance of the pitch depends upon the fact that, generally speaking, low sounds suggest tympanic and high sounds labyrinthine involvement. The pitch is best determined by holding a vibrating tuning-fork of 256 D. V. opposite the patient's ear and requiring him to decide whether the subjective noise is higher or lower in the musical scale, according to which it may be classed as a high or low sound. Further than this, the determination of the exact pitch has not been demonstrated to be of any practical value. It is also of importance to learn whether the noise varies in intensity, at what hour it is most noticeable, how it is influenced by physical exercise, rest, ingestion of a full meal, etc., etc. The length of time during which the tinnitus has been present is also of some importance, since tinnitus of purely tympanic origin rarely persists very long; while a subjective noise persisting constantly from childhood to adult life might suggest the possibility of anomalies in the course or position of vessels, etc., etc. Of still greater diagnostic value are the reactions to functional tests. Thus elevation of the lower tone limit suggests tympanic disease, whereas lowering of the upper tone limit points to labyrinthine disturbances. Bone condition is also of diagnostic value, increase pointing to tympanic, and diminution to labyrinthine disorder. With tinnitus confined to one ear, Weber's test, if lateralized to the same side, would suggest tympanic trouble; whereas if lateralized to the opposite side, the inference would be of labyrinthine disturbance. In other words, the same tests which would aid in locating the cause of an impairment of hearing may be used in our search for the lesion upon which tinnitus depends. But while the physical and functional examinations of the ear may give clear enough indications in tinnitus of purely aural origin, there are also many cases in which they are of service only in their negative results, which direct the attention away from the ear in the search for the

underlying cause. In such cases the most thorough physical examination and most searching inquiry into the patient's general condition may be necessary—all the organs of the body being looked to for evidences of disease, and each slightest symptom being weighed as a possible factor in producing the patient's trouble. Obviously, no single plan of treatment will ever be found applicable to all the different forms of tinnitus and the results of treatment must always be proportionate to the thoroughness of the search for the underlying cause."

131. **Internal Derangements of the Knee-Joint.**—Allison summarizes his paper by saying that: "1. The internal derangement of the knee-joint should suggest: (*a*) Dislocated semilunar cartilage; (*b*) the impingement of a fold of synovial membrane between the ends of the bones; (*c*) presence of a floating cartilage or joint mouse; (*d*) contusion of the margin of the semilunar cartilage, with swelling and infiltration of blood at the site of their attachments. 2. These conditions can usually be differentiated. 3. The treatment is rest, massage, mechanical support, gymnastics, and operative. 4. The operation should not be undertaken without carefully analyzing the case, and usually only when the other measures have failed."

132. **Dental Affections and the Eye.**—The influence of diseased teeth upon the eye forms the subject of Bicknell's paper. He notices first the infectious disorders which travel upward to the orbit by a continuity of tissue and reports two cases of orbital abscess from this cause. Neuroses are considered under the following heads: reflex irritation affecting the striated and unstriated muscles; reflex irritation affecting the mucous membrane; reflex irritation affecting the retina, optic nerve, and intraocular tissues. Each of these with their subdivisions are remarked upon. The literature, of course, is large, since almost everything has been attributed to teething.

135. **Formalin.**—Anderson calls attention to the use of formalin in certain local exerescences, which he classes under the head of semi-malignant, as they have the general appearance of a malignant growth. He also remarks that rectal fissures and fistulas are sometimes cured by this local application, and also suppurating surfaces to which it can be even more quickly applied. Sinuses wherever found can generally be made to close by this agent.

139. **Bromid of Strontium.**—Dearing has found this bromid most effective in an average of 40 cases of epilepsy treated daily in hospital practice. He also gives the results of 60 cases that he treated daily for a period of 130 days with bromid of strontium alone, which record shows a very remarkable reduction in the number and vigor of the convulsions, while there was no depression either mental or physical, or loss of appetite, no acne or untoward symptoms of any kind. Each case, however, must have individual attention, the bowels kept regular, the secretions, excretions and habits attended to. The dose he uses is from 10 to 30 grains, preferably in a solution with a bitter tonic.

144. **Children's Testimony.**—Pettyjohn finds that children are not reliable witnesses. He reviews some legal opinions and gives facts derived from officers connected with the trials of cases. He thinks that the testimony of children and infants is in most cases unreliable, and that children should never be called as witnesses except under the most favorable conditions for the child, and never in an open court. There should be expert opinion as to whether such testimony is admissible and it should not be allowed to stand against the accused except when the court is thoroughly satisfied as to the child's intelligence.

152. **The Future of the Negro.**—This article gives a number of interesting statistical details and the author's conclusions therefrom. He believes that the negro race is dying out, that its death-rate is exceeding its natural increase, and that the negro question will sooner or later become one of the past. The insanitary habits of the mass of the negro race and their immorality are gradually killing off the race. He does not exclude, however, in his arguments the possibility of the few exceptional cases continuing to survive and propagate a better race, a possibility which it seems should be considered. The article is written in a kindly spirit toward the negro, and he advocates the study of his traits and tendencies and, if possible, the rescue of him from the disease and immorality which threaten to destroy him.

154. **Tornwaldt's Disease.**—This condition of chronic nasopharyngeal bursitis is accepted as an actual entity, or at least a clinical syndrome, by Roy. Whether the so-called bursa pharyngea is a distinct bursa or blind pouch, he says it is certainly the cause of a peculiar form of nasopharyngeal catarrh. He does not agree with Delavan in saying that it is nothing more than a neglected hypertrophy. Two cases are reported in neither of which was the treatment satisfactory.

159. **Febris Innominata.**—Preston calls attention to certain cases in which the clinical signs of typhoid were lacking except the continued fever which, however, lacked the cyclic character of typhoid. None of the cases had diarrhea, tympanitis, rose spots, nor delirium to any great amount, nervousness nor the typhoid tongue. The suspicion of malaria seemed to have governed the treatment to a large extent, but without specially striking success. He thinks it possible that we have a toxic cause for some of our cases of continued fever not yet explained, and that we have passing under the name of continued fever conditions that are not true typhoid. The blood test he thinks will come into play to determine the diagnosis, though more than the Widal test alone will be required.

164. **Acute Hemorrhagic Nephritis.**—Miller reports the case of a child thirteen months old in which this condition occurred and reviews the literature, giving an analysis of the symptoms and summary of the reported cases. He concludes that nephritis is a rare complication of influenza occurring chiefly in young adults and children, and is almost unknown in infancy. Albuminuria is more frequent, probably present in all severe cases. Hematuria alone is not infrequent and is seen most often in early life. Nephritis may appear early in influenza or after the acute symptoms have subsided. It is usually an early complication, occurring in one half the cases before the eighth and in two-thirds of the cases before the twenty-first day after the commencement of the influenzal attack. The type varies. It may be that of ordinary acute nephritis, but the majority are of the hemorrhagic type, this being specially frequent in young people and children. Edema is absent in more than one-half the cases, and when present is apt to be slight. The onset is usually attended with fever. The nephritis is of short duration, generally lasting under three weeks. The prognosis is good, though few cases pass into the chronic subacute stage. If the kidneys are already affected the outcome is worse and apt to be serious and fatal. From the meager pathological reports the lesions appear to be those of infectious or toxic nephritis, often taking the form of glomerulo-nephritis.

168. **Tuberculosis.**—Crandall summarizes his views as to the malnutrition of tuberculosis in the following: "1. Wasting, anemia, and other evidences of malnutrition are constant accompaniments of tuberculosis in children. 2. These symptoms may occur in infants long before local disease can be detected and occasionally no local signs whatever are manifest before death. 3. In infants, tuberculosis shows a special tendency to be disseminated or to conceal itself in the deep tissues, as the lymph nodes. The disease may then run a course identical with simple marasmus. 4. In some cases a period of anemia and wasting is followed by a stage of irregular fever, after which local lesions appear, usually in the lungs. 5. In other cases tuberculosis in children begins with well-marked local manifestations, particularly pneumonia. In these, evidences of malnutrition appear promptly and are usually progressive. 6. The anemia of tuberculosis, whether it appears before or after the occurrence of other symptoms, is usually a simple anemia and presents nothing characteristic. 7. A diagnosis of tuberculosis cannot be made alone from the character of the anemia or the malnutrition. However, persistent and increasing malnutrition in a child without discoverable cause is always suggestive of tuberculosis. 8. Anemia in adolescents should receive prompt and active attention, for it vastly increases the danger of tubercular invasion, which is particularly common at that period of life."

FOREIGN.

Titles marked with an asterisk (*) are abstracted below.

Archives de Neurologie (Paris), January.

1 Extension in the Treatment of Nervous Diseases. P. Koulindjy.—"De l'extension et de son application dans le traitement des maladies nerveuses."

Bulletin de la Soc. Med. des Hop. de Paris, January 10.

2 *Latent Syphilitic Aortitis and Visceral Neuralgia. L. Rénon.—"Aortite syphilitique latente et nevralgies viscerales."

Bulletin Medical (Paris), January 4, 11 and 15.

3 *Early Diagnosis of Relapse in Typhoid. G. Lemoine.—"Sur le diagnostic précoce de la rechute au cours de la fièvre typhoïde."

4 Foundation of Climato-Therapy. A. Manquat.—"Les climats thérapeutiques français, la climatothérapie et ses bases."

5 *Information to be Derived from the Urine in Regard to Nutritional Diseases. A. Robin.—"Séméiologie urologique des maladies de la nutrition. Son application au diagnostic, au pronostic et au traitement."

Echo Med. du Nord (Lille), January 19.

6 Study of Wounds of the Diaphragm. O. Lambret.—"Les plaies du diaphragme à gauche."

Gazette Hebd. de Med. et de Chir. (Paris), January 2 and 16.

7 The Hippocratic Finger in Cirrhosis of the Liver. A. Gilbert and P. Lereboullet.—"Le doigt hippocratique dans les cirrhoses biliaires."

8 Evolution of Pupil Disturbances and Deformities in the Mentally Unbalanced. E. Marandon de Montyel.—"De l'évolution des troubles et des déformations pupillaires chez les vesaniques."

9 *Surgical Intervention in Biliary and Alcoholic Cirrhosis. M. Guillot.—"De l'intervention chir. dans les cirrhoses biliaires et alcooliques."

10 Hemorrhages from Rupture of Pregnant Tube. Lejars.—"Les hemorrhagies par rupture de la trompe gravide."

11 Cancer of the Testicle in Abdominal Ectopia. C. Kaeppelin.—"Le cancer du testicule en ectopie abdominale."

Presse Medicale (Paris), January 15 and 18.

12 *Trunecek's Inorganic Serum. L. Lévi.—"Le sérum de Trunecek."

13 Koch's Latest Method of Treating Tuberculosis. R. Romme.—"La bactériothérapie de la tuberculose d'après la nouvelle méthode du Professeur Koch."

14 Constant Presence of Eberth's Bacillus in the Blood in Typhoid Fever. Busquet.—"Présence constante du bacille d'Eberth dans le sang de 21 typhoidiques."

15 Heart Affections Observed in the Course of Syphilis and Gonorrhea. G. Fischer.—"Sur les maladies du coeur dans le cours de la syphilis et de la gonorrhée."

16 *Action of Trunecek's Serum. L. Lévi.—"Sur l'action du sérum de Trunecek."

Progres Medical (Paris), January 11.

17 *Enteroptosis as the Cause of Movable Kidney. F. Glenard.—"Etapes de la théorie entéroptosique du rein mobile."

January 18.

18 Cerebral Syphilis Simulating General Paralysis. E. Brissaud.—"Syphilis cérébrale simulant une paralysie générale."

Revue Hebd. de Laryngologie, etc. (Bordeaux), January 18.

19 *Tuberculosis of the Larynx in Children. M. Perrin.—"La tuberculose du larynx dans l'enfance."

Revue de Chirurgie (Paris), January.

20 *Inguino-Interstitial Hernia. P. Berger.—"La hernie inguino-interstitielle et son traitement par la cure radicale."

21 Cholesteatoma of the Breast. L. Dor.—"Le cholestéatome du sein."

22 *Cure of Serous Meningitis by Trephining. P. Lecène.—"Un cas de meningite séreuse d'origine otitique. Trépanation bilaterale, guérison."

23 *Prompt Intervention in Traumatisms of the Liver. S. Mercade.—"De l'intervention précoce dans les traumatismes du foie."

Revue de Medecine (Paris), January.

24 *Certain Neuropathic Accidents of Digestion. Ch. Féré.—"Contribution à l'étude des accidents neuropathiques de l'indigestion."

25 *New Explanation of Etiology of Tuberculosis. J. Ferran.—"Nouvelle étiologie de la tuberculose et vaccination antituberculeuse." Concluded from preceding number.

26 Toxic and Dehydrating Action of Alcohol. C. Valentin.—"L'alcool comme toxique et comme deshydratant."

27 *The Nitropropiol Test for Sugar. F. de Gebhardt.—"Note sur un nouveau procédé de recherche du sucre par les tablettes de nitropropiole."

Semaine Medicale (Paris), January 15.

28 Comparative Tests of the Pathogenic Action of Human and Bovine Tubercle Bacilli in Animals. D. A. de Jong.—"Expériences comparatives sur l'action pathogénique pour les animaux des bacilles tuberculeux provenant du boeuf et de l'homme."

Allg. Med. Central-Zeitung (Berlin), January 1 and 4.

29 Value of Artificial Ozone to Purify Air in Living Rooms. Eydam.—"Das Werth des Ozons f. Gesunde und Kranke und Künstliches Ozon in den Wohnräumen."

30 Negative Results of Cancroin in Treatment of Cancer.—Jacoby.—"Zur Behandlung des Krebses mit Cancroin."

Archiv f. Gynaekologie (Berlin), lxv, 2, 1902.

31 *Ultimate Results of Operative Treatment of Retroflexion and Prolapse. H. Anderach.—"Dauererfolge der operativen Retroflexio- und Prolapsbehandlung."

32 *Action of Liquid Air in Experimental Infection of the Vagina and Uterus. B. Wolff ii, and J. Meyer.—"Die Einwirkung flüssiger Luft auf die inficirte Vaginal- und Uterusschleimhaut bei Hunden."

33 Etiology of Fever During Delivery. H. Mueller.—"Zur Aetiologie des Fiebers unter der Geburt."

34 Five Years of Maternity Statistics. P. Baumm.—"Fünf Jahre Wochenbettstatistik."

35 Pathogenesis of Eclampsia. A. Dienst.—"Ueber die Pathogenese der Eklampsie auf Grund path. anat. Befunde. Blut und Harnuntersuchungen eklamptischer Mütter und deren Früchte."

36 Eclampsia in Mecklenburg-Schwerin, 1881-1891. Buettner.—"Die Eklampsie in M. S., 1881-1891."

37 Eclampsia. Schmorl.—"Zur Lehre von der Eklampsie."

Berliner Klin. Wochenschrift, January.

38 *Etiology of Infectious Diseases. Menzer.—"Ueber Angina, Gelenkrheumatism, Erythema nodosum und Pneumonie, nebst Bemerkungen ueber die Aetiologie von Infectionskrankheiten."—Concluded from preceding number.

39 Negative Results of Experimental Radiography of Internal Infections. Krebs.—"Electrisches Glühlicht und Innere Infection."

Centralblatt f. Gynaekologie (Leipsic), January 4.

40 Selection of Operation for Myoma. R. Olshausen.—"Ueber die Wahl der Operation bei Myomen."

41 *Reducing the Size of the Abdominal Cavity by Doubling the Abdominal Wall. L. Heidenhain.—"Ueber Verkleinerung des Bauchraumes und Verhütung von Brauchbrüchen durch Doppelung der Bauchdecken."

42 *Acute Sepsis, Ileus, Pseudo-Ileus, Iodoform Intoxication, Uncontrollable Vomiting, Which? Haeberlin.—"Akute Sepsis, Ileus, Pseudo-Ileus, Iodoformintoxication, unstillbares Erbrechen?"

January 11.

43 The Ten Months of Pregnancy. B. S. Schultze.—"Ueber die 10 Schwangerschaftsmonate."

Dermatologisches Centralblatt (Berlin), January.

44 Is the Milk Non-Infectious in Case of Recent Syphilis, or Does It Induce Immunization of the Nursling? L. Leven.—"Nicht-Infectiosität der Milch bei frischer Lues oder Immunisirung durch dieselbe?"

45 Aseptic Glass Syringe-Holder. Dreyer.—"Zur Asepsis der Subcutanspritzen."

Centralblatt f. Chirurgie (Leipsic), January 18.

46 *Cold as a Cause of Arteriosclerosis and Degeneration of Certain Tissues. Zoege von Manteuffel.—"Ueber die Wirkung der Kälte auf einige Körpergewebe."

47 *Artificial Pneumothorax as a Preliminary to Extirpation of Tumors in the Thorax. J. Dollinger.—"Der artefizielle Pneumothorax als vorbereite Operation zur Exstirpation durch greifender Brustwandtumoren oder Lungentumoren."

Centralblatt f. Kinderheilkunde (Leipsic), January 1.

48 Post-Typhoid Affections of the Bones. J. Langer.—"Ueber post-typhöse Knochenerkrankungen."

Jahrbuch f. Kinderheilkunde (Berlin), January.

49 *Buttermilk in Infant-Feeding. Teixera de Mattos.—"Die Buttermilch als Säuglingsnahrung."

50 Uncooked Milk in Case of Atrophy and Chronic Gastro-intestinal Catarrh in Nurslings. S. Monrad.—"Ueber Benutzung von roher Milch bei Atrophie und chron. Magen- und Darmkatarrh bei Säuglinge."

51 Diphtheria in the Vienna Hospitals from 1896 to 1900. F. Siegert.—"Die Diphtherie in den Wiener Kinderspitälen von 1896-1900."

52 *Artificially Clabbered Cow's Milk for Infants' Food. L. Langstein.—"Die Ernährung Säuglinge mit gelabter Kuhmilch."

Muenchener Med. Wochenschrift, January 21.

53 Serum Diagnosis of Tuberculosis. E. Romberg.—"Weitere Mittheilungen zur Serumdiagnose der Tuberkulose."

54 Scientific Hydrotherapy and Courses of Mineral Waters. Von Vogl.—"Ueber wissenschaftliche Hydrotherapie und Wasserkuren."

55 *Treatment of Severe Anemia of Gastro-Intestinal Origin. F. Perutz.—"Ein Beitrag zur Behandlung schwerer Anämien gastro-intestinalen Ursprungs."

56 *Albuminuria in Form of an Emulsion in Case of Eclampsia and Uremia. H. Cramer.—"Ueber einen eigenthümlichen Urinbefund (Emulsions-Albuminurie) bei Eklampsie und Uraemie."

57 *Relations between Diabetes Mellitus and Insipidus. P. Kuhn.—"Ueber den Zusammenhang von Diabetes Mellitus und Insipidus."

58 Blood Poisoning and Amputation. H. Brauser and H. Doerfler.—"Blutvergiftung und Amputation."

Neurologisches Centralblatt (Berlin), January.

59 Initial Manifestations of Paranoia. A. Pick.—"Zur Lehre von den initialen Erscheinungen der Paranoia."

60 *Dietetic Treatment of Epilepsy. Schaefer.—"Zur diätetischen Behandlung der Epilepsie."

61 Tests of Voltalization. Zanietowski.—"Versuche ueber Voltalisation."

Prager Med. Wochenschrift (Prague, Bohemia), January 2.

62 Explanation of Irregular Pulse. H. E. Hering.—"Bemerkung zur Erklärung des unregelmässigen Pulses."
63 Medicine in Ancient Egypt. F. v. Oefele.—"Zur altägyptischen Medicin."

Therapeutische Monatshefte (Berlin), January.

64 Malformation of the Thorax as Predisposition to Pulmonary Affections. W. A. Freund.—"Thoraxanomalien als Prädisposition zu Lungenphthise und Emphysem."
65 *Operative treatment of Calculi in the Bladder. Miclescu.—"Die Harnsteine der Blase und ihre operative Entfernung."
66 *Indications for Operating Gastric Ulcer. C. Delachaux.—"Ueber die Indicationen z. Operation bei Ulcus Ventriculi."
67 Puro. L. Fürst.—"Puro in der Kranken-Diätetik."
68 Bromid-Albumin compounds in Nervous Affections. J. Silberstein.—"Ueber die Behandlung von Nervenkrankheiten mit Bromeiweisspräparaten."

Therapie der Gegenwart (Berlin), January.

69 *Treatment of Catarrh. H. Nothnagel.—"Zur Behandlung acuter Katarrhe."
70 Emodin and Purgatin as Purgatives. W. Ebstein.—"Ueber das Emodin und das Purgatin als Abführmittel."
71 *Effects of Exposure to Cold. O. Lassar.—"Ueber Erfrierung."
72 Pentosuria. F. Umber. "Die Pentosurie."
73 *Flap Treatment of Cicatricial Contractions. J. Wolff.—"Ueber einen Fall von Transplantation frischer gestielter Hautlappen bei narbigen Gelenkcontracturen."

Wiener Klin. Rundschau, January 12.

74 *Operative Treatment of Gastric Ulcer. R. Porges.—"Beitrag zur operativen Behandlung der Magengeschwüre."

January 19.

75 *Pathogenesis of Choked Disc in Case of Brain Tumors. Elschnig.—"Die Pathogenese der Stauungspapille bei Hirntumor." Concluded from 1 and 2.
76 Macrodactylia. M. Battler.—"Ueber Makrodaktylie."

St. Petersburger Med. Wochenschrift, January 11.

77 Efforts and Aims in Treatment of Chronic Gonorrhea in Regard to Consent to Marry. G. v. Engelmann.—"Die Aufgaben und Ziele bei der Behandlung der chronischen Gonorrhoe in Bezug auf die Frage der Eheschliessung."

Gazzetta Degli Ospedali (Milan), January 12 and 16.

78 Study of the Effects of Intravenous Injection of Organ Extract on the Coagulation of the Blood and on the Spermotoxic Value of the Serum. J. Salvioli.—"Degli effetti dell' iniezione endovenosa dell' estratto di ghiandola genitale maschile sulla coagulazione del sangue e sul valore spermotossico del siero."
79 *Difference in Action between the Extracts of the Medulla and of the Cortex of the Suprarenal Capsules. J. Salvioli.—"Sopra il diverso modo di agire degli estratti midollare e corticale delle capsule surrenali."
80 Chorea and Helminthiasis. G. N. De Luna.—"Corea ed elmintiasi."

Revista Medica (Mexico), January 1.

81 Infectious Fevers in Mexico. J. Olvera.—"Un apuntamiento sobre ciertas fiebres infecciosas que se han observado en la capital en estos dias."

British Medical Journal (London), January 25.

82 A Visit to Some American Hospitals. G. B. Ferguson.
83 *The Operative Treatment of Lymphangiectasis of Filarial Origin. J. Maitland.
84 Observations on Human Filariasis in Trinidad, West Indies. George A. Vincent.
85 *On the Causal Relationship between "Ground-itch" or "Panighao," and the Presence of the Larvæ of the Ankylostoma Duodenale in the Soil. Charles A. Bentley.
86 Malarial Fever in St. Lucia, West Indies. George Gray and George C. Low.
87 Leprosy and Congenital Symmetrical Keratodermia. George Pernet.
88 *Blackwater Fever. R. U. Moffat.
89 Notes on Filaria Demarquaili. George C. Low.
90 The Suctorial Bulb in "Culex." G. Trevor Collingwood.
91 Notes on Lightning-stroke in South Africa. J. G. Berne.
92 Inoculation in the Incubation Stage of Plague. Alice M. Corthorn.
93 *The Treatment of Dysentery by Rectal Injections. Cecil F. Lillie.

The Lancet (London), January 25.

94 *The Progress of Surgical Methods. T. B. Grimsdale.
95 The Art of Clinical Medicine and Its Technique. William Ewart.
96 *A Further Note Concerning the Frontal or Supra-orbital Reflex. Walker Overend.
97 Case of Recent Traumatic Perineal Dislocation of the Right Hip with a Dissection of the Joint. Hugh M. Rigby.
98 A Case of Pulmonary Regurgitation. Edmund Cautley.
99 Combined Fetal and Maternal Dropsy. H. Valdemar Munster.

The Journal of Tropical Medicine (London), January 15.

100 Notes on the First Plague Epidemic at Changpoo, Fokien, South China. J. Preston Maxwell.
101 *Dental Caries. Kenneth W. Goadby.

Australasian Medical Gazette (Sidney, N. S. W.), December.

102 *Feeding in Enteric Fever. Robert Brummitt.
103 Acromegaly. J. Flynn.
104 On the Classification of Displacements of the Uterus. A. Watson Munro.

Indian Medical Gazette (Calcutta), January.

105 Pre-service Surgeons. (To be continued.) D. G. Crawford.
106 *Typhoid as a Common Continued Fever of Natives in Calcutta. Leonard Rogers.
107 A Preliminary Report of Observations of the Habits of Anopheles. R. N. Campbell and U. N. Brahmachari.
108 Anopheles Mosquitoes in Tezpur, Assam. Chas. A. Bentley.

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2. **Latent Syphilitic Aortitis and Visceral Neuralgia.**—Rénon states that the intense visceral pains in the case described caused the diagnosis of liver or kidney colic accompanied by aortic insufficiency to be made. The aortic lesion had developed in the course of a year and suggested a possible explanation for the visceral neuralgia. The pains began to subside after ten days of specific treatment and all symptoms vanished before the course was completed. There was a history of mild syphilitic infection twenty years before.

3. **Early Diagnosis in Relapse in Typhoid Fever.**—Lemoine calls attention to the dissociation between the pulse and the normal temperature in case of convalescence from typhoid fever when a relapse is impending. He gives the curves of a number of cases showing the rapidity of the pulse with the low temperature.

5. **Information to be Derived from the Urine in Nutritional Diseases.**—Among the various valuable points to be learned from study of the urine, which Robin enumerates, is the early differentiation of typhoid fever. The latter is probable, 1, when the urine is the color of beef bouillon with greenish reflections, turbid but without the urobilinuric tint; 2, when there is slight, constant albuminuria; 3, when urohematin and the derivatives of skatol disappear; 4, the constant presence of indican; 5, increase of uric acid; 6, absence of uro-erythrin and 7, marked decrease in the earthy phosphates. In dubious cases a considerable amount of earthy phosphates, without albumin or indican, testifies against typhoid fever. In case of icterus from liver colic, if the urine ceases to turn green when nitric acid is added, the presumption is that the bile is resuming its natural course. In case of pneumonia or other similar disease, an increase in the amount of urine and sudden increase in the proportion of solid matters herald the crisis and defervescence close at hand. In the treatment of obesity, it is possible to estimate and maintain the balance between the nitrogen ingested and the amount excreted. In a recent case Robin had reduced the patient's weight by 27 kilograms, carefully maintaining the nitrogenous balance. When this point was reached he found that the excreted nitrogen surpassed the amount ingested, demonstrating that urea was being formed at the expense of the muscles. The patient had lost all the fat he could lose, and it was time to suspend the reducing treatment. In diabetes also, the urine will show whether antipyrin is being tolerated or not. If the density of the urine increases, even although the proportion of sugar is diminishing, the drug should be discontinued.

9. **Surgical Intervention in Case of Cirrhosis of the Liver.**—Guillot describes a case in which Talma's operation was successfully performed. He states that this operation has been done 28 times to date. There is no record of the results in the case of one patient; 2 were improved and 11 were cured. It failed in 14.

12. **Trunecek's Inorganic Serum Treatment for Arteriosclerosis.**—Lévi publishes a number of cases of various affections attended by arteriosclerosis, which he has treated by injections of Trunecek's mixture of all the alkaline salts normally in the blood serum, which he calls "inorganic serum." It is ten times more concentrated than natural serum. (See THE JOURNAL, xxxvi, p. 1507.) In one case the patient was a woman of 57 with aortic stenosis and insufficiency and ectasia of the right primary carotid. For twenty months she had suffered from nocturnal attacks of pain simulating angina pectoris, lasting sometimes two and one-half hours, and recurring nearly every night. These attacks were completely banished by a few injections of the serum, but it had no effect on the anatomic lesions. The dyspnea of arteriosclerotic subjects is cured by a very small amount of the serum. Relief is usually experienced even after a single injection. Lévi de-

scribes 5 cases in detail. In a case of arterial cachexia in a man of 86, the attacks of asthma ceased, the dyspnea was relieved, the cyanosis disappeared, sleep, appetite and physiologic warmth returned, with general physical and moral improvement. An ulcerative lesion was not affected, but this also yielded in a similar case in Trunecek's experience. Lévi has been making a special study of the effects of the serum in cerebral arteriosclerosis. He found it very effective in the cure of localized symptoms, vertigo, visual disturbances, tinnitus aurium, headache and deficient memory, even in old established cases. Tests with other patients showed that it was ineffectual in case of an actual focus of necrosis. He applied it also in 22 cases of sclerous otitis. All were improved, some so rapidly that after a single injection the patients could hear sounds which they had not been able to hear for years. He is now studying the action of the serum in rheumatism, nervous affections, etc., and various conditions of congestion, in which it promises well. The formula of the serum is as follows: Sodium sulphate, 44 eg.; sodium chlorid, 4.92 gm.; sodium phosphate, 15 eg.; sodium carbonate, 21 eg.; potassium sulphate, 40 eg.; acq. dest. to make 100 gm. The amount injected is progressively increased from 1 c.c. to 5, the injection repeated every second, fourth or seventh day. Trunecek prefers the forearm, but Lévi makes the injection in the buttocks. He also alternates rectal with subcutaneous injections, ten of each, in some cases. He states that a rectal injection of 35 c.c. causes no disturbances. The action of the serum is rapid but transient. (See below.)

16. **Study of the Action of Trunecek's Serum.**—Lévi is convinced that Trunecek's concentrated serum has a multiple action. He has demonstrated that it lowers the blood pressure and modifies the composition of the blood to a certain extent. This latter feature explains the benefit derived from it in chronic rheumatism, in the symptoms which sometimes accompany neurasthenia on a foundation of arteriosclerosis, in hysteria, in local congestions, etc. He relates a number of cases in which this serum has proved remarkably effective in curing retention in incipient prostatitis, hysteric sweats and nervous pseudo-rheumatic pains. It is applicable to all cases of arterial hypertension, all forms of arteriosclerosis, sclerosis of the vessels of the heart, brain, ear and kidneys. Its efficacy is more pronounced the earlier it is administered, before the vessels have lost their contractility. Established lesions are no contra-indication, but its action is less evident. It may prove effective in averting or attenuating seizures in epilepsy, eclampsia, in certain cases of uremia and even of diabetes. He is now testing a large number of artificial serums of this kind and mineral and sea water, to see if still better results are attainable.

17. **Enteroptosis, Movable Kidney and Neurasthenia.**—Glénard has been studying for fifteen years the variety of nervous dyspepsia or vague neuropathy which proves rebellious to ordinary treatment. The clinical picture is much the same as in the curable cases, although perhaps symptoms of insufficiency of the liver or cholemia are more pronounced. If the patient recline, with the lumbar region elevated, and sighs profoundly it is possible to palpate the kidney under the right hypochondrium, with other indications of general enteroptosis. The latter is the primary trouble. It usually commences at the angle of the colon and may be traumatic and primary, or secondary to infectious or toxic processes or to emotions. As the intestines settle down, the kidney is dragged with them, the liver is also affected, and the gastric digestion suffers. The fundamental characteristics of this condition, encountered in all stages, are a sensation of weakness, discomfort in the mesogastrium, attaining its maximum two or three hours after dinner, aggravated by fats, starches, raw foods, wine and milk, with constipation and insomnia during the middle of the night. The abdomen is relaxed, the cecum can be palpated as a small, hard roll, the transverse colon as a cord across the aorta, which is easily accessible to palpation. Treatment should be fourfold: an elastic abdominal bandage; daily saline laxatives, 7 gm. of sodium sulphate and eventually 5 to 10 eg. of aloes; a meat diet; sodium bicarbonate and in case of paroxysmal attacks, treatment as for biliary lithiasis, although calculi rarely occur. Cold hydrotherapy is a valuable and certain adjuvant. The movable kidney is merely an incident in the general ptosis, and symptoms referred to the kidney are much more liable to be the result of the intestinal displacement, as is also the case in troubles caused by deformity or abnormal movability of the spleen, liver or kidney and dilatation of the stomach.

19. **Tuberculosis of the Larynx in Children.**—Perrin's monograph was awarded the Heydenreich prize by the medical faculty of the University at Nancy. He reviews all the cases published in European literature and adds two new case-reports. One of the latter patients—a girl of 6—recovered complete health under medical treatment. Not a trace of tuberculous disease could be discovered nine months after treatment was instituted. It consisted in administration of potassium bromid, hot packs to the neck and thorax and medicinal sprays. Cases of recovery are rare.

20. **Inguino-Interstitial Hernia.**—Berger has operated on seven men on account of congenital interstitial hernia complicated by ectopia of the testicle. The hernia spreads in the thickness of the abdominal wall by separating its layers. It may be exclusively intraparietal or there may be a diverticulum emerging through the external abdominal ring, which may also allow the passage of the testicle. The deep abdominal ring is higher and nearer the anterior-superior iliac spine than normally. The testicle in the hernial sac is almost always undeveloped, and the muscular and fibrous walls of the abdomen usually display marked atrophy and weakness. The spermatic cord is frequently too short to allow the testicle to be drawn to the scrotum. In some cases the testicle is entirely enclosed by a sheath distinct from the peritoneo-vaginal sac occupied by the hernia. In a few rare cases the testicle completes its descent and a parietal and scrotal hernia develops behind it. Inguino-interstitial hernia occurs also in women—he describes eight cases he has personally observed. This condition should be operated even in the aged, unless there are direct contra-indications, as serious accidents are apt to occur, and as it can not be effectively maintained by a truss. The incision should be parallel with the fibers of the external oblique, above Poupart's ligament. The testicle should be ablated if the subject is over 25, except in conditions peculiarly favorable for orchidopexy. Under this age every effort should be made to retain it. The strengthening of the abdominal wall is the most important part of the operation. If the Bassini method does not promise a certain result, the suture of the internal oblique and of the tendon of Poupart's ligament must be reenforced by incising the aponeurosis of the rectus and fastening the outer lip of this incision to Poupart's ligament throughout the entire extent of the inguinal canal. The operation is terminated by the superposing of the two lips of the incision in the aponeurosis of the external oblique and suturing its lower lip to the inner edge of the aponeurosis of the rectus, and its upper lip to the anterior surface of the aponeurosis of the external oblique, close to Poupart's ligament. Four cuts in the article show the various steps of the operation.

22. **Serous Meningitis Cured by Trephining.**—Lecène describes a personal case and summarizes six others that have been published in which the symptoms indicated a serous meningitis. By this he means a very serious syndrome occurring in the course of acute otorrhea or otitis, suggesting brain abscess or meningitis. It is characterized by an evident hypertension of the cerebrospinal fluid, with cerebral edema. Lumbar puncture might cure in such cases, but the violent onset of the symptoms justifies more radical measures, and in the case reported bilateral trephining, allowing the escape of about 20 and 15 c.c. of cerebrospinal fluid, cured the patient completely. He was a young man convalescing from typhoid fever, and for three hours and a half had had a general convulsion every five minutes, with other serious symptoms. The convulsions continued unmodified until the second trephining opening had been made, when after the escape of 15 c.c. of cerebrospinal fluid, they ceased at once and did not recur. In all the seven cases the

trephining was undertaken for the search of a hypothetical abscess, and the exploratory operation proved the unexpected cure of a serous meningitis. Patients exhibiting this syndrome should not be allowed to die under the diagnosis of uremia or meningitis without radical intervention to allow the escape of the accumulated cerebrospinal fluid. One of the patients was not operated on, and the autopsy showed merely an accumulation of six ounces of fluid at the base of the brain, accompanying bilateral suppuration of the mastoid cells.

23. **Treatment of Traumatisms of the Liver.**—Mercade adds two more to the limited number of successfully operated cases of traumatism of the liver on record. One was a stab wound, treated by rapidly suturing the lips of the wound together. The other was a contusion, resulting from the subject having been run over. It was impossible to coaptate the ragged lips of the wound and the suture merely aimed to draw the liver together in order to aid in cicatrization. Hemostasis was secured by supplementary tamponing. The wound was drained in each case and artificial serum injected.

24. **Neuropathic Accidents of Digestion.**—Féré describes 8 cases of unusual morbid manifestations accompanying digestion. In one case a previously healthy man had syncope after every hearty meal, and the same occurred in a patient with paralysis agitans. In a case of uncontrollable vomiting of pregnancy, numerous pains occurred during digestion. In another patient with neurasthenia resulting from a sunstroke, recurring pain was noted during digestion, located invariably in a traumatic wound in the leg which had healed perfectly and been free from symptoms for twenty-six years. There was no pain at any other time. In the fifth case, acroparesthesia and inability to walk occurred during difficult digestion in a woman with neurasthenic tendencies. In the sixth, difficult digestion was accompanied by aggressive actions and once by transient furious delirium, the attacks terminating in vomiting. A child exhibited a specific contraction of the left leg during indigestion, never noted at other times and subsiding always after she had vomited. The eighth patient was a general paralytic and difficult digestion was accompanied by profuse local sweats. Tardy and persisting digestive occurrences of this nature are probably due to intoxication, but the early and acute manifestations, terminating in vomiting or sudden defecation, are probably of reflex origin.

25. **New Explanation of Etiology of Tuberculosis.**—Ferran is director of the municipal laboratory of bacteriology at Barcelona, Spain. He announces that his researches have shown the tubercle bacillus to be merely a modified colon bacillus. Before the tubercle bacillus appears in the sputa, he finds constantly another bacillus which he calls the "phthisiogenic." This heralds the approach of tuberculosis, and tubercle bacilli soon appear. In his experiments with the colon bacillus, he found that under certain conditions this bacillus was substituted by the phthisiogenic bacillus and this in turn by the tubercle bacillus, although the conditions absolutely prohibited the possibility of extraneous infection. He believes that practicable vaccination against tuberculosis will soon be possible by following these indications. He has isolated the phthisiogenic bacillus from human sputa and from the excreta of dogs, and both bacilli finally turned into the Koch bacillus. Both induce cachexia after a preliminary pretuberculous pneumonia or other affection of the respiratory passages, and both are essential for the development of tuberculosis. The latter is merely a colon bacillosis, the bacilli modified by the chemical changes which it induces in the infected tissues. He has obtained the same clinical and experimental results with colon bacilli from man and from the cat. These bacilli grown in Martin bouillon or serum induce tuberculosis after being injected a certain number of times.

27. **Simple Nitropropiol Test for Sugar.**—Gebhardt has modified this test mentioned in THE JOURNAL, xxxvi, p. 354. He adds 10 to 15 drops of urine to 10 c.c. of water and dissolves one nitropropiol tablet in the fluid, warming it for two to four minutes. If there is any grape sugar in the urine, the fluid turns greenish and then a deep indigo blue. This reaction does not occur with any other substances in the urine in the absence of sugar. The test is extremely simple, convenient and sensitive to even a small proportion of sugar.

31. **Ultimate Results of Operative Treatment of Retroflexion and Prolapse.**—Andersch tabulates the result of 304 operations performed at Pfannenstiel's clinic between 1896 and 1900 and 24 in his private practice. The total number of patients was about 750 in each. The remote results observed have confirmed him in the advantages of the following outline for treatment: If the displacement causes symptoms which require intervention, he treats with pessaries, as far as possible, all cases of movable retroflexion with or without prolapse or procidentia. All cases of movable retroflexion combined with prolapse or procidentia, and also all cases of prolapse or procidentia without retroflexion, are treated by vagino-fixation, with or without occlusion of the plica according to the age of the patient. The rare cases of isolated retroflexion of a movable uterus, unadapted for pessary treatment, are treated by ventrofixation or the Alexander-Adams operation, and all cases of fixed retroflexion by ventrofixation.

32. **Liquid Air as a Disinfectant for Vagina and Uterus.**—Wolff and Meyer report that anthrax bacilli exposed to the action of liquid air for eight days were not killed, but their virulence was much attenuated. In eight series of tests on dogs, liquid air applied to the mucous membrane of the vagina and uterus, previously infected, caused the temperature to fall to normal, with other indications of a powerful disinfecting action.

38. **Etiology of Infectious Diseases from New Point of View.**—Menzer thinks that the state of the organism, the external conditions, etc., have a more important share in the etiology of infectious disease than has hitherto been appreciated. For instance, he suggests that the germ causing measles in children and the subsequent immunity may be merely the consequences of the peculiarly receptive state of the organism in childhood. It causes the clinical picture we call measles in the child, but in the adult it is possible that the same germ may be responsible for various catarrhs and bronchitis. He attributes the primary infection to invasion of the tonsils, and describes several cases of articular rheumatism commencing with sore throat, in which he was able to cultivate diplo- and strepto-cocci from the peritonsillar tissue, and staphylococci in a case of erythema nodosum. The etiology, therefore, of infectious diseases may be sought in the varying reciprocal relations between the human cellular economy and the ubiquitous micro-organisms under varying external conditions, such as climate, etc.

41. **To Reduce the Size of the Abdominal Cavity by Doubling the Abdominal Wall.**—Heidenhain reports and illustrates two cases in which he followed Piccolo's suggestion and reduced the size of the abdominal cavity after the removal of a large tumor. He incised the wall on the median line from the symphysis to the ensiform process, and doubled the walls over each other like a double-breasted coat. This procedure may also prove useful in abdominal hernias or enteroptosis.

42. **Acute Sepsis, Ileus, Iodoform Intoxication or Uncontrollable Vomiting, Which?**—Haeberlin describes a case presenting the above puzzling clinical picture. The patient was a debilitated multipara in a new pregnancy. She owed her life to saline infusion, and made a rapid recovery after abortion had been induced. He suggests that possibly many of the operative fatalities are due to a combination of factors, harmless in themselves, such as vomiting and meteorism, but dangerous on account of the condition of debility, and producing symptoms such as we are accustomed to see only in dangerous affections of the peritoneum or violent mechanical disturbance of the intestines.

46. **Cold as a Cause of Arteriosclerosis and Joint Deformities.**—Von Manteuffel explains the tardy appearance of gangrene after a limb is frozen as merely the secondary, remote result of alteration or occlusion of the blood vessels caused by the cold. His research on limbs amputated on account of frost gangrene has confirmed this assumption, and also his success-

ful reproduction of the same condition by freezing the hind legs of guinea-pigs by spraying them with ether. The vessels exhibited the typical lesions of arteriosclerosis. The bones also suffered from the action of the cold, the manifestations being the same as in the vessels, that is, the death of the previous normal tissue and regeneration by connective tissue. As the bone dies, the periosteum probably begins to proliferate as cicatricial tissue, while in the epiphyses the defect is compensated by the bone marrow. The joint thus weakened yields to the pressure and an arthritis deformans may be the result, its development promoted by the weight of the body above. The alterations in the bones were so pronounced and direct that they were evidently directly traceable to the action of the cold rather than to the intermediation of arteriosclerosis. The edema in a frozen limb is not able alone to induce these processes of degeneration and regeneration, as he established by further experiments.

47. **Artificial Pneumothorax as a Preliminary to Operations on the Thorax.**—Delagénière has announced that a pneumothorax occurring during the course of an operation causes no trouble if it develops slowly. Dollinger thinks that the removal of extensive tumors of the thorax wall or in the lungs, would be much facilitated if pneumothorax were artificially induced the day before as a preliminary measure. He describes two cases showing the great benefit to be derived from this measure. In one a sarcoma the size of a man's fist was to be removed from the right wall of the thorax. The day before he inserted a tube in an incision in the fifth interspace under local anesthesia. The respiration was 35 to 40 a minute, the pulse 120, and the patient experienced no discomfort. When the thoracic cavity was opened for the extirpation of the tumor the lung was seen to be collapsed, but still sharing a little in the movements of respiration. The latter ceased for a few seconds when blood was wiped off the surface of the lung. The action of the heart continued normal all the time. The wound was sutured without disturbing the lung. It expanded completely in the course of two weeks. He had a similarly favorable experience in another case. The patient evidently stands the narcosis better when the pneumothorax is induced the day before and the operation can proceed more rapidly.

48. **Post-Typhoid Affections of the Bones.**—Langer reports two cases of an affection of the vertebræ involving also the spinal cord and emerging roots, evidently a post-typhoid spondylitis. Such post-typhoid ulcerations generally have a long incubation and frequently localize on a spot injured by some recent or old trauma. Quincke describes post-typhoid spondylitis as characterized by the unusual violence and extent of the spontaneous local pains, by the swelling of the soft parts, the acute, febrile course, rapid vanishing of the spinal symptoms, and the extremely frequent localization in the lumbar region. In one case the affection did not develop until seven years after the typhoid fever; in the cases described the intervals were four and eleven weeks. He has noticed that the agglutinating reaction is more often absent in the young than in adults and is soon lost. It was pronounced in one of his cases.

49. **Buttermilk for Infant Feeding.**—DeMattos states that since de Jaeger recommended buttermilk as a food for infants, six years ago, it has become universally and persistently popular throughout Holland. It has been tentatively introduced into Germany during the last year and has already won high appreciation. When pure, fresh buttermilk can not be obtained, families churn a little butter at home to provide the babe with its buttermilk every day. It is prepared by stirring a level tablespoonful—about 10 to 12 gm.—of fine rice, wheat or other flour into a liter of buttermilk less than twenty-four hours old. It is then boiled over a moderate fire until it boils up thrice, stirring continuously, after which two or three heaped tablespoonfuls of cane or beet sugar are added. Five years of extensive experience with this regime have confirmed its remarkable value in cases of children who are not thriving on breast milk or artificial foods and in desperate cases of all kinds.

52. **Clabbered Milk for Infants.**—Langstein reports twenty-five cases of very sick children who were fed on milk artificially clabbered with rennet, and then stirred or beaten to break up the clots very fine. In nearly every case the gastro-intestinal symptoms rapidly subsided, the vomiting ceased and stools became normal. See THE JOURNAL, XXXVII, p. 480.

55. **Severe Anemia of Gastro-Intestinal Origin.**—Perutz points out that pernicious anemia is almost regularly accompanied by a lack of hydrochloric acid and of all the peptic ferments in the stomach, with diarrhea or constipation, and anatomic alterations in the alimentary canal. He describes a case in detail in which the symptoms indicated a serious blood disease and arsenic had been administered on the diagnosis of severe anemia. The patient had suffered from gastro-intestinal troubles for years and the arsenic only aggravated his condition. Perutz therefore treated the gastro-intestinal disturbances alone, by lavage of the stomach every morning and frequent irrigation of the intestines. The patient, a man of 53, was fed with gruel and egg, introduced through the stomach tube. Every evening a quart of chamomile tea was injected into the rectum. He rapidly recovered under this regime, gradually supplemented by more nourishing, easily digested foods, but the anatomic alterations in the alimentary canal still impose continued caution in the diet. His case had been considered hopeless by his previous medical attendants, but under this dietetic treatment he recovered strength and was restored to his business.

56. **Peculiar Emulsion Albuminuria in Eclampsia and Uremia.**—Cramer discovered in the case of three patients already in fatal coma that the urine was turbid and milky and did not become clear by repeated filtering. The microscope revealed that the emulsion consisted of albuminoids. It vanished spontaneously after the urine had stood two days in a warm room. Two of the patients were in puerperal eclampsia, the other in uremia, and the urine had been drawn on account of retention. This super-saturation of the urine with albumin probably indicates great insufficiency on the part of the kidneys and speedy dissolution.

57. **Relations Between Diabetes Insipidus and Mellitus.**—Kuhn describes the case of a patient with diabetes insipidus. Eight days before her death, she presented the classical clinical picture of diabetes mellitus.

60. **Dietetic Treatment of Epilepsy.**—Schaefer had three epileptics under observation for a year and a half whose epilepsy dated from childhood and had proved rebellious to all treatment and entailed more or less imbecility. They had 20 to 30 seizures a month. He treated them from June 26 to August 10 by suppressing salt in their food and incorporating bromid in their bread, according to Balint's directions. (See THE JOURNAL of July 20, 1901, p. 228). The mental and moral improvement was marked and one patient had only 2 seizures during July, the second only 2 and the third 7, while none had any seizures during the last four weeks of the treatment. Return to ordinary diet was followed by the recurrence of the seizures after six to nine days. [Garbini reports similar experiences with 14 epileptics, in the *Revista Mensile di Neuropatologia* for December. The seizures diminished by 73 per cent. under suppression of salt and administration of 1 gm. of bromid a day, and the seizures were only a third as long. The mental and general condition showed marked improvement. All were severe cases. Lion has recently reported remarkable benefit in 21 cases of epilepsy from the simultaneous suppression of salt, administration of bromid and of brain extract.—ED.]

65. **Advantages of Median Lithotomy.**—Miclescu reports that he has performed this operation 120 times in Macedonia and always with the most satisfactory results except in one case. The operation was always done in the patient's home, usually a shanty, without assistance. He ascribes his invariable success to the median operation, and to his practice of suturing the periprostatic and peri-urethral tissues with silk, never suturing the urethra itself. A catheter was introduced

into the fossa navicularis urethræ for three days. The wound healed usually in four days and the patients were able to get up the seventh. His single fatal case was a child. In this case during the course of the operation, the patient, operator and instruments were drenched by sudden rain through the roof.

66. **Indications for Operation in Case of Gastric Ulcer.**—Delachaux considers irrigating the stomach with a solution of iron chlorid the first indication except in case of perforation. Operative intervention is indicated only when perforation is certain, or when treatment with iron chlorid brings no relief and the certainty is thus acquired of the existence of stenosis or malignant degeneration.

69. **Treatment of Acute Catarrh.**—Nothnagel states that complete recovery after an acute catarrh is possible only when Nature's efforts at repair are not disturbed. It is therefore of the greatest importance to treat every acute catarrh, even the slightest, from the very first day, before permanent anatomic alterations occur, perpetuating the catarrh or entailing excessive vulnerability on the tissues. Old-established catarrh is practically incurable. Catarrh that has lasted six months is scarcely capable of complete retrogression. On the other hand, an acute catarrh will heal without medication if all injurious elements are kept away from it. These elements, in case of acute catarrh of the respiratory apparatus, are the breathing of cold or alternately cold and heated air, the action of vicissitudes of temperature on the skin, wind, dust, smoke and speaking. In case of catarrh of the digestive apparatus, food should be abstained from during the first few days as much as possible, and then for a long time the diet should be restricted to the foods making the least demands on the peptic and motor activity of the stomach and intestines. In both cases these precautions must be continued until the functional disturbances have entirely disappeared.

71. **Effects of Exposure to Cold.**—Lassar remarks that the effects of exposure to severe cold—freezing—like those of a burn, range from a mere patch of hyperemia to necrosis. Lupus erythematosus, for instance, develops as frequently in tissues that have been over-cooled as in those that have been overheated, in cabdrivers and field hands as frequently as in firemen and cooks. Cold affects the tissues less intensely at first, but its action is more persistent. The vascular system suffers most. The various pathologic processes which locate by preference at the tip of the nose are probably attracted by some preceding alteration in the blood vessels, due to the action of cold, possibly in remote childhood. Prophylaxis should guard against sudden exposure to severe cold and include rational hardening of the system against cold, as by the custom of a daily cold bath or rub. According to Lassar's experience, there is only one way of treating the permanent redness of nose, cheeks, etc., resulting from venous ectasia, and this is the laying waste of the pathologic, newly-formed ampullæ in the vessels. If quite superficial, they can be reached by applying a salve made of 10 parts beta naphthol, 40 parts sulphur, 25 parts green soap. This is applied once or several times a week for one-half to one hour and then wiped off dry. The skin becomes gradually accustomed to it, and it can then be applied oftener and longer. No inconveniences were observed in any of Lassar's numerous cases thus treated. Transient irritation from it at first is combated with talcum powder or a soothing salve. The amount of dilatation of the capillaries and veins can be best determined by the absorption of light under a powerful microscope, the tissues lighted from the side. He obliterates the lumen of the vessels by a special contrivance consisting of forty gold-plated platinum points, not too sharp, driven by an electromotor, piercing the skin with hundreds of fine pricks in a few seconds. Actual freezing should be treated the same as a burn, keeping the parts aseptic, dusting with a dry powder and dressing with bismuth, watching carefully for indications of gangrene. If this occurs and if it can not be kept dry under anilin blue, which has such remarkable antiputrefaction properties, the gangrened part must be treated like any infected wound. Phlegmons and pyemia are liable to follow the use of household remedies and easily-spoiling salves. Chilblains, on the contrary, are notably benefited by salves, especially by a combination of the cerate of subacetate of lead, olive oil and carbolized vaselin. It is applied over night, smeared copiously on a cloth, and all signs of the chilblain soon disappear. When the hands become red and the redness recurs on exposure to cold, the circulation can be stimulated by gymnastic exercises. Both active and passive massage of the hand can be produced by holding the hand at the level of the shoulder with the wrist loose and snapping the fingers forward, at first slowly and then faster and faster.

73. **Flap-Treatment of Cicatricial Contractions.**—Wolff secured such good results in a case he describes and illustrates, that he recommends the method in similar cases of contraction. The young man's arm was bent almost like a Z in consequence of a severe burn years before. The wrist was cut across transversely on the side of the contraction, the incision avoiding the vessels and nerves, but carried down to the bone until every contracting fiber had been found with the finger and severed. The joint could then be mobilized at once. When the joint was straightened, the defect left by the gaping wound was nearly the width of the palm. This was closed by a pedunculated flap from the thorax. The elbow and thumb were treated later in the same way and almost complete function has been restored, without the excision of a scrap of tissue.

74. **Operative Treatment of Gastric Ulcer.**—Porges states that at Hochenegg's clinic operation in case of gastric ulcer is by Hacker's method when possible and by Wolfler's when it is impossible to pull the stomach forward or when the posterior wall is involved in the morbid process. In case the stomach is small, the entire walls infiltrated with carcinoma and adherent to the pancreas, Maydl's jejunostomy is to be preferred. In a case described a gastric ulcer in the lesser curvature had perforated, but as the wall was adherent to the liver at this point there was very little escape of stomach contents. The case was treated by detaching the liver and introducing a strip of gauze and a drain through the defect, after a Hacker gastroenterostomy had been done. Fluid food was given by the mouth at once; it flowed down into the intestines by its own gravity without seeking an outlet through the defect, which closed later spontaneously by granulation. The recovery was prompt and uneventful, evidently favored by the open treatment of the wound in the stomach and the direct communication into the small intestine.

75. **Pathogenesis of Choked Disc in Case of Brain Tumors.**—Elschnig states that choked disc is an interstitial inflammation, too early in its appearance and too pronounced to be merely the result of the tardy degeneration of the nerve. It must be due—in case of brain tumors—to the toxins generated in the tumor, which are swept to the optic nerve in the orbit by the cerebrospinal fluid. They penetrate into the lymph spaces and cause interstitial inflammation. The optic nerve is evidently predisposed to inflammation and is liable to react with the condition we call choked disc to any intracranial affection or neuritis as well as to a tumor in the brain. The increased pressure of the cerebrospinal fluid in case of tumors causes the serous accumulations in the papilla.

79. **Difference in Action Between Extracts of the Medulla and of the Cortex of the Suprarenal Capsules.**—Salvioli found that both of the extracts increased the blood pressure, but the extract of the medulla had a stronger and more durable action in this respect. The latter also affects the respiration, rendering it more frequent and superficial. The results of his tests establish the fact that the former stimulates and the latter paralyzes the inhibiting centers of the heart.

80. **Infectious Fevers in Mexico.**—Olvera calls attention to the atypical character of the infectious diseases that have prevailed in the City of Mexico since the extensive drainage operations have been under way. He states that cases of abnormal typhus have been numerous, also of pseudo-typhoid fever, true enteric fever, typhoid pneumonia, malignant measles, etc. He believes that only the mildness of the climate has preserved the city from serious ravages by these unusual, mixed diseases. The constitutions of the inhabitants are not tried by

excessive cold nor excessive heat and hence are more resistant than under the same conditions elsewhere.

83. **Filarial Lymphangiectasis.**—Maitland calls attention to the operation suggested by him in 1889 of removing the glands of the groin in cases of this condition, on the theory that they contain the parasites. His first operation was a success. Its practical value has been since fully established by the results obtained by other surgeons. The operation, however, is still condemned in some text-books, and therefore he brings up the subject. Three cases are reported. The objection raised to this operation for the removal of lymphatic varices and lymphadenoceles, that such operations are unscientific in principle and do not completely remove the varix and the obstruction to the lymph circulation, is answered by him that practice has proven it to be quite successful in relieving the patient from the periodic attacks of fever and pain. Three cases are reported illustrating this fact. The second objection, that such operations are liable to be followed by lymphorrhagia or lymphatic fistula, is not the experience of Madras surgeons. He has never seen such a result himself and never heard of it in the experience of others. The third objection, that such cases are prone to be attacked by septic inflammation or erysipelas, is also contradicted by experience. The point he especially wishes to emphasize is that the object of these operations is not to lessen the circulation of the lymph, but to relieve the patient from suffering, and here the result is satisfactory.

85. **Pani-Ghao.**—This condition, known locally in Assam as ground- or water-itch, effects especially the native laborers who go bare-foot. Bentley has investigated its etiology and finds that it is due to introduction of the larval ankylostoma duodenalis from the soil into which it is introduced through the habits of the natives in causing fecal infection of the soil. The wearing of shoes is known to be an almost certain preventive of the disease.

88. **Blackwater Fever.**—Moffat discusses the alleged importance of quinin as a cause in the production of blackwater fever. He remarks that he has himself suffered from the disease when he had had no quinin for two months. He has known cases of it where quinin could be absolutely excluded. His theory of the cause of the disease is that it is due to lack of care in the patient during the apyretic stage. An old malarial patient should go to bed directly he feels the first symptom of a malarial attack, even though the temperature is yet normal, and, if possible, should be kept in bed after an attack until it has been normal for at least twenty-four hours. In these cases he believes hemoglobinuria does not appear. Since quinin is the only really reliable cure for malaria, in crediting to it such a condition as blackwater fever we would be frightening the inexperienced and making them shy of employing it in sufficient doses, with the result of severer attacks of malaria accompanied by a heavier death rate.

93. **Rectal Injections in Dysentery.**—This form of treatment, Lillie remarks, does not appear to be very strongly supported, but he has tried it himself in several cases in South Africa and found it most useful. He gave very gentle injections of small quantities at a time, an ounce or so every few seconds, and two or three times a day. He generally used boracic acid, 10 gr. to the ounce, and sometimes other antiseptics. It is an important point to give them often enough. The bulk of the enema is never less than 1½ pints, but it is very gently introduced and in this way no unpleasantness is complained of. He considers the saline treatment of dysentery to be on the same principle as this. The bowel is flushed out and toxic substances removed, and with these removed griping and tenesmus are relieved. Injections possess the advantage of introducing this fluid for flushing from without and not draining from the patient's already weakened system and of applying antiseptics to the local foci of disease.

94. **Asepsis in Surgery.**—Grimsdale's article is a plea for asepsis as opposed to antisepsis. He gives graphic curves, showing the difference in the temperature and pulse of some 80 cases under the two systems, 40 under each, and also gives credit to a surgeon of 100 years ago, Alanson, for suggesting in principle this method. He quotes from his recommendations, which are surprisingly modern.

96. **Frontal ("Ophthalmic") Reflex.**—The object of Overend's article is to call attention to the more exact designation, "ophthalmic," which he offers, and to express the view that the symptom is a true reflex and obtainable from both the skin and the periosteum supplied by that nerve. He remarks that he first described it in 1896 under the name of "frontal reflex" and demonstrated it to medical friends as far back as 1889.

101. **Dental Caries.**—Goadby discusses the causes of dental caries, and concludes that it is largely due to carbohydrates, and the acid-forming bacilli. Proteids will tend to the reduction of caries; fermentative bacteria of the putrefactive class in that they tend to produce an alkaline reaction will also prevent the development of rapid caries. He attributes the great frequency of the condition among the European races to a defective condition of the enamel, and the fact that owing to the civilization of the race and the influence of sexual selection on the type of beauty as well as the large development of the frontal lobes of the cerebrum, the facial angle has been considerably altered, and with it the superior maxilla has become contracted with concomitant crowding of the dental arch. The teeth have remained for the most part of the same size. The result is that irregularity and crowding are common and a very fruitful cause of dental caries. The general physical condition of foodstuffs also differs; the hard, coarse and fibrous food is no longer used, and its cleansing effect on the tooth surface is replaced by the soft, smooth variety of food so commonly consumed. To prevent caries, he thinks much attention should be given to children from the appearance of the first temporary teeth. The use of the tooth brush should be taught early, and he recommends an alkaline antiseptic wash for the mouth and a dentifrice to be used. His article concludes with a table showing the approximate distribution of caries in the various races, from the Eskimo, 1.4 per cent., to the European, 87 to 90 per cent.

102. **Feeding in Typhoid.**—Brummitt's change from the orthodox mode of treating typhoid with liquid food alone is dated from a patient who ate up her poultice which had been ordered for an abscess, and since then he has used soft instead of liquid foods quite extensively. He reports a number of cases. The nurses observe that the patients do better, keep stronger, and he has seen cases where the desire for stronger food was expressed almost from the outset and as urgent as in the poultice case. He would assume in such that the digestive apparatus was in fair working order. He thinks when the digestive power of the stomach is good as it often is, a mutton chop, an egg, a banana, or a cup of milk would reach the cecum in very much the same form. He commences with light farinaceous foods and bread and milk, and goes on to mince meat, mashed potato with milk or gravy, custard, light boiled eggs with breadcrumbs or thin bread and butter; boiled white fish or fowl, brain, rice in various forms, etc., and some vegetables are often desirable, but he would remove the solid portions. Watchfulness as to the evacuations, however, must be continued, and if non-digested food is passed a change should be made at once. He does not advocate the indiscriminate use of strong food in enterica; adherence to milk diet would be better than that; but the judicious use of a larger dietary scale in many febrile cases and nearly all convalescents, would be good practice. A careful study of 98 cases leads him to conclude that the well-being of the patient generally is favored by the use of a more liberal diet.

106. **Typhoid.**—The difference of opinion as to the frequency of typhoid in the East Indian natives is noticed by Rogers, who says that it is decidedly frequent in those of Calcutta instead of their being immune. Nearly every case in which the temperature remains high for three weeks or more continuously in natives, is enteric, while mild or abortive cases of shorter duration are exceptional. It is not always easy to diagnose with certainty typhoid in these patients until very late in the disease by clinical means, but great assistance can be obtained by the skilled use of the Widal test.

Queries and Minor Notes.

CURE OF ALCOHOLIC AND MORPHIN HABITS.

UPPER SANDUSKY, OHIO, Jan. 28, 1902.

To the Editor:—Would you be so kind as to state in your next issue what the willow-bark cure for alcoholic and morphin habits is which is now being so prominently brought before the public? Also, what treatment, if any, is the best for the above-named habits in your opinion, and oblige. W. W. S.

ANS.—As regards the "willow-bark cure" we have no reliable information; it is probably a bitter tonic. The question is referred to our readers for reply. With regard to the best treatment for the alcohol habit, we believe that a strong moral impulse is the most effectual and lasting one in present conditions, as well as the safest one, and that without it or absolute restraint, almost any other treatment will probably fail. As regards the morphin habit and its cure, we would refer to the abstracts of Jennings' paper in the London *Lancet*, which appeared in THE JOURNAL of Aug. 31, 1901; of McBride's paper in THE JOURNAL of Sept. 1, 1900, and the articles and discussion in THE JOURNAL of August 18, of that year.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE PRACTICAL MEDICINE SERIES OF YEAR-BOOKS, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Volume III. The Eye, Ear, Nose and Throat; Edited by Casey A. Wood, C.M., M.D., Albert H. Andrews, M.D., and T. Melville Hardie, A.M., M.D. December, 1901. Cloth. Pp. 346. Price, $1.50. Chicago: Year-Book Publishers.

CHARTER, ORDINANCES AND BY-LAWS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, as Amended June 14, 1899, with an Appendix Containing Articles of Agreement and Deeds of Trust, and the Rules Providing for the Creation and Government of Sections of the College, as Amended April 1, 1896. Paper. Pp. 124. Philadelphia. 1900.

DIGEST OF CRITICISMS ON THE UNITED STATES PHARMACOPEIA. Seventh Decennial Revision (1900) Published by the Committee of Revision of the Pharmacopeia of the United States of America (1900-1901). Part III, Comprising Abstracts of Papers up to May 15, 1901. Pasteboard. Pp. 181. Philadelphia. 1901.

CHEMICAL PATHOLOGY IN ITS RELATION TO PRACTICAL MEDICINE. By C. A. Herter, M.D., Professor of Pathological Chemistry in the University and Bellevue Medical College, New York. In one 12mo volume of 454 pages. Cloth, net, $1.75. Philadelphia and New York: Lea Brothers & Co.

THIRTY-FOURTH ANNUAL REPORT OF THE BOARD OF WATER COMMISSIONERS OF THE CITY OF MIDDLETOWN, N. Y., for the Year Ending January 31, 1901. Paper. Pp. 70. Middletown, N. Y.: L. S. & J. D. Stivers, Printers. 1901.

PROCEEDINGS OF THE CONNECTICUT MEDICAL SOCIETY, 1901; 109th Annual Convention, Held at Hartford, May 22 and 23. Published by the Society. Cloth. Pp. 350. Bridgeport, Conn.: The Farmer Publishing Co.

MUNICIPAL ENGINEERING AND SANITATION. By M. N. Baker, Ph.B., C. E., Associate Editor of *Engineering News*. Cloth. Pp. 317. Price, $1.25. New York: The Macmillan Co. 1902.

TRANSACTIONS OF THE RHODE ISLAND MEDICAL SOCIETY. Vol. VI—Part II, 1900. Paper. Pp. 277. Providence: Snow & Farnham. 1901.

The Public Service.

Army Changes.

Movements of Army Medical Officers under orders from the Adjutant-General's Office, Washington, D. C., January 23 to 29, 1902, inclusive:

I. P. Agostini, contract surgeon, leave of absence from the Department of Cuba is extended one month.

James B. Ferguson, contract surgeon, from Fort Yellowstone, Wyo., to his home, Olivia, Minn., for annulment of contract.

William C. Gorgas, major and surgeon, U. S. A., in addition to his present duties is assigned as disbursing officer of the Medical Department at Havana, Cuba.

Henry S. Kierstead, lieutenant, and asst.-surgeon, U. S. A., now at San Francisco, Cal., assigned, on the expiration of his present leave of absence, to duty at the General Hospital, Presidio of San Francisco, Cal.

John A. McAlister, contract dental surgeon, now at San Francisco, Cal., to report to the commanding general, Department of California, for transportation to Manila, P. I., for duty in the Division of the Philippines.

Edgar A. Mearns, major and surgeon, U. S. A., from Fort Adams, R. I., to Fort Yellowstone, Wyo.

Edward B. Moseley, major and surgeon, U. S. A., president of a board at Denver, Colo., to determine the fitness of officers of the Army for promotion.

George J. Newgarden, captain and asst.-surgeon, U. S. A., member of a board at the General Hospital, Presidio of San Francisco, Cal., for the examination of candidates for admission into the Medical Department of the Army, vice Captain William H. Wilson, asst.-surgeon, U. S. A., relieved.

Ogden Rafferty, major and surgeon, U. S. A., member of a board at the general hospital, Presidio of San Francisco, Cal., for the examination of candidates for admission to the Medical Department of the Army, vice Major Robert Gibson, surgeon, U. S. A., relieved.

Henry H. Rutherford, lieutenant, asst.-surgeon, U. S. A., from the Division of the Philippines to duty at the General Hospital, Presidio of San Francisco, Cal.

Louis A. Thompson, contract surgeon, leave of absence on account of sickness extended two months.

Charles W. Thorp, contract surgeon, relieved from duty in the Division of the Philippines, and at the General Hospital, Presidio of San Francisco, Cal., to accompany the 4th Infantry to Fort Sam Houston, Tex., whence he will proceed to Fort Clark, Tex., for assignment to duty.

Philip G. Wales, captain and asst.-surgeon, U. S. A., member of a board at Denver, Col., to determine the fitness of officers of the Army for promotion.

William A. Wickline, contract surgeon, from Butte, Mont., to duty at Fort Lawton, Wash.

Navy Changes.

Changes in the Medical Corps of the Navy, week ending Feb. 1, 1902:

Rear Admiral W. K. Van Reypen, detached from duty as chief of the Bureau of Medicine and Surgery, Navy Department, and ordered home and to wait orders.

Asst.-Surgeon C. M. Oman, commissioned asst.-surgeon from Dec. 18, 1901.

Asst.-Surgeon G. M. Mayers, detached from the Naval Hospital, Cavite, P. I., and ordered to the *Isla de Cuba*.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, U. S. Marine-Hospital Service, during the week ended Feb. 1, 1902:

SMALLPOX—UNITED STATES.

Arkansas: Little Rock, Jan. 20, 17 cases, 1 death.
California: Los Angeles, Jan. 11-18, 8 cases; San Francisco, Jan. 12-19, 4 cases.
District of Columbia: Washington, Jan. 11-18, 2 cases.
Illinois: Jan. 18-25, Belleville, 1 case; Chicago, 8 cases; Danville, 1 case; Freeport, 3 cases; Galesburg, 2 cases.
Indiana: Evansville, Jan. 18-25, 4 cases.
Iowa: Clinton, Jan. 18-25, 5 cases.
Kentucky: Lexington, Jan. 18-25, 3 cases.
Maine: Portland, Jan. 18-25, 1 death.
Massachusetts: Boston, Jan. 18-25, 44 cases, 6 deaths; Cambridge, Jan. 18-25, 3 cases, 1 death; Lowell, Jan. 18-25, 1 case; New Bedford, Jan. 18-28, 6 cases; Somerville, Jan. 18-25, 1 case; Weymouth, Jan. 11-18, 1 case, 1 death; Woburn, Jan. 18-25, 1 case.
Michigan: Detroit, Jan. 18-25, 6 cases.
Minnesota: Minneapolis, Dec. 28-Jan. 18, 57 cases.
Missouri: Hannibal, Jan. 11-18, 1 case.
Nebraska: Omaha, Jan. 18-25, 54 cases.
New Hampshire: Nashua, Jan. 18-25, 3 cases.
New Jersey: Camden, Jan. 18-25, 19 cases, 1 death; Jersey City, Jan. 18-26, 13 cases, 1 death; Newark, Jan. 18-25, 35 cases, 6 deaths.
New York: Jan. 18-25. Binghamton, 1 case; New York, Jan. 18-25, 54 cases, 11 deaths.
Ohio: Cincinnati, Jan. 17-24, 17 cases; Middletown, Jan. 18-25, 1 case; Toledo, Jan. 18-25, 1 case; Youngstown, Jan. 18-25, 4 cases, 4 deaths.
Pennsylvania: Altoona, Jan. 8-25, 1 case; Norristown, Jan. 18-25, 1 death; Philadelphia, Jan. 18-25, 90 cases, 19 deaths; Pittsburg, Jan. 18-25, 2 cases; Reading, Jan. 20-27, 1 case; Scranton, Jan. 15-22, 1 death.
Rhode Island: Providence, Jan. 18-25, 2 cases.
Tennessee: Memphis, Jan. 18-25, 16 cases.
Vermont: Burlington, Jan. 18-25, 21 cases.
Washington: Aberdeen, Jan. 18, prevalent; Coupeville, Jan. 16, 2 cases; Hoquaim, Jan. 18, prevalent; Tacoma, Jan. 12-19, 3 cases.
Wisconsin: Green Bay, Jan. 19-26, 13 cases; Fond du Lac, Jan. 18-25, 1 case; Milwaukee, Jan. 18-25, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, Dec. 28-Jan. 4, 13 cases.
Canada: Halifax, Jan. 18-25, 1 case; Winnipeg, Jan. 11-27, 6 cases.
Colombia: Cartagena, Jan. 1-12, 7 deaths.
France: Marseilles, Dec. 1-31, 1 death; Nantes, Dec. 1-31, 3 cases; Paris, Jan. 4-11, 6 cases; St. Etienne, Dec. 15-31, 1 case.
Great Britain: Glasgow, Jan. 10-17, 4 cases; Liverpool, Jan. 4-11, 3 cases; London, Jan 4-11, 872 cases, 56 deaths; Newcastle-on-Tyne, Jan. 4-11, 5 cases.
Greece: Athens, Jan. 4-11, 1 case.
India: Bombay, Dec. 17-24, 1 death; Karachi, Dec. 15-22, 14 cases, 3 deaths.
Italy: Naples, Jan. 4-11, 12 cases, 4 deaths; Palermo, Dec. 28-Jan. 4, 1 death.
Russia: Odessa, Dec. 28-Jan. 4, 4 cases, 2 deaths; St. Petersburg, Dec. 28-Jan. 4, 8 cases, 1 death.

YELLOW FEVER.

Mexico: Vera Cruz, Jan. 11-18, 3 cases, 2 deaths.

CHOLERA.

Straits Settlements: Singapore, Nov. 30-Dec. 7, 2 deaths.

PLAGUE.

India: Bombay, Dec. 17-24, 175 deaths; Karachi, Dec. 15-22, 55 cases, 43 deaths.

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